

U.S. DEPARTMENT OF COMMERCE
National Technical Information Service

PB-259 444

Guidelines for Preparation of Water Quality Management Plans

Environmental Protection Agency, Washington, D C

Sep 74

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September 1974

PB 259 444



Guidelines for Preparation of Water Quality Management Plans

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U. S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

BIBLIOGRAPHIC DATA SHEET		1. Report No.	2.	3. Recipient's Accession No. PB-259 444																		
4. Title and Subtitle Guidelines for Preparation of Water Quality Management Plans.			5. Report Date September 1974	6.																		
7. Author(s)			8. Performing Organization Rept. No.																			
9. Performing Organization Name and Address Environmental Protection Agency Washington, D. C. Office of Water and Hazardous Materials			10. Project/Task/Work Unit No.																			
			11. Contract/Grant No.																			
12. Sponsoring Organization Name and Address			13. Type of Report & Period Covered																			
			14.																			
15. Supplementary Notes (PC A04/MF A01)																						
16. Abstracts The enactment of the Federal Water Pollution Control Act Amendments of 1972 imposes several legislative mandates with respect to the development of planning documents to be used to coordinate and direct water pollution abatement efforts. The purpose of basin plans is to coordinate and direct activities related to water quality management on a river basin scale. The basin plan is a management document that identifies the basin's water quality problems and sets forth a remedial program to alleviate those problems. To achieve this objective, the basin plan should be designed to provide the necessary analysis for basin management decisions. The report provides information to this end.																						
17. Key Words and Document Analysis. 17a. Descriptors																						
<table border="0"> <tr> <td>*Water quality management</td> <td>Facilities</td> </tr> <tr> <td>*Guidelines</td> <td>Data acquisition</td> </tr> <tr> <td>Preparation</td> <td>Sequencing</td> </tr> <tr> <td>Water pollution abatement</td> <td>Sources</td> </tr> <tr> <td>River basins</td> <td>Limits</td> </tr> <tr> <td>Regional planning</td> <td>Standards</td> </tr> <tr> <td>Problem solving</td> <td></td> </tr> <tr> <td>Scheduling</td> <td></td> </tr> <tr> <td>Coordination</td> <td></td> </tr> </table>					*Water quality management	Facilities	*Guidelines	Data acquisition	Preparation	Sequencing	Water pollution abatement	Sources	River basins	Limits	Regional planning	Standards	Problem solving		Scheduling		Coordination	
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Coordination																						
17b. Identifiers/Open-Ended Terms Federal Water Pollution Control Act Amendments of 1972 Priorities Needs Standards compliance																						
17c. COSATI Field/Group 13B, 5A																						
18. Availability Statement National Technical Information Service Springfield, VA 22161			19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 67																		
			20. Security Class (This Page) UNCLASSIFIED	22. Price PC\$4.50/ MF\$3.00																		

**GUIDELINES FOR PREPARATION
OF
WATER QUALITY MANAGEMENT
PLANS**

**U. S. ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D. C. 20460
SEPTEMBER 1974**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

All Water Quality Officials:

The enactment of the Federal Water Pollution Control Act Amendments of 1972 imposes several legislative mandates with respect to the development of planning documents to be used to coordinate and direct water pollution abatement efforts. The purpose of basin plans is to coordinate and direct activities related to water quality management on a river basin scale.

The basin plan is neither a broad water and related land resources plan nor a basinwide facilities plan. Simply stated, the basin plan is a management document that identifies the basin's water quality problems and sets forth a remedial program to alleviate those problems. To achieve this objective, the basin plan should be designed to provide the necessary analysis for basin management decisions. Moreover, there must be a flexible revision mechanism to reflect changing conditions in the basin. A basin plan should be a dynamic management tool, rather than a rigid, static compilation of data and material.

Specifically, the basin plans will provide for orderly water quality management by:

- (1) Identifying Problems: determining existing water quality, applicable water quality standards, and point and non-point sources of pollution.
- (2) Determining Priorities: assessing water quality and abatement needs so as to establish priorities for awarding construction grants, processing permits, and taking other needed steps to achieve water quality goals.
- (3) Scheduling Actions: setting forth compliance schedules or target abatement dates and indicating necessary State and local activities.
- (4) Coordinating Planning: identifying needs and priorities for 201 facility plans and 208 areawide plans within the basin and reflecting the results of those activities.

I expect these guidelines to serve continuously as a useful planning tool. To improve the usefulness of these guidelines, we need constructive comments and suggestions reflecting your usage experience. Such comments may be furnished to the appropriate EPA Regional Administrator, or to the Director, Water Planning Division (WH-454), Washington, D.C. 20460. Following revisions, you will receive revised pages of the guidelines.

Copies of the guidelines may be obtained from the EPA Regional Office in your area.

Thomas L. Ayer

Assistant Administrator
for Water and Hazardous Materials

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I. INTRODUCTION

A. Forward.

These guidelines describe the preparation of basin plans pursuant to the State continuing planning process (Section 303(e) of the Federal Water Pollution Control Act Amendments of 1972 and 40 CFR Part 130-131). They are intended for use as the basin planning methodology by State and local personnel in preparing water quality management plans and by members of the public who may wish to review and comment on the plans during their development. Additional guidelines will be issued regarding assessment of municipal needs and for plan elements to be included in plan revisions, including guidelines on water quality standards revisions, non-point sources, residual waste control, and land use.

The 1972 Amendments establish a national goal of water quality suitable for fishing and swimming by mid-1983, and they call for a two-stage program for attaining that goal. The principal means of water quality control for point sources of pollution will be uniform levels of effluent limitations. Limitations to be achieved by the first stage, mid-1977, will be based on current technology, which must be supplemented in individual cases by any higher level effluent limitations necessary to achieve applicable water quality standards. The second stage will necessitate higher control levels in order to achieve the 1983 requirements.

Basin planning is a major element in the State water quality management system for implementing these requirements and for defining and achieving national water quality goals. Each plan will provide for orderly water quality management by:

- o Outlining a plan--organizing information and selecting management actions.
- o Determining priorities--assessing water quality and abatement problems and needs throughout the basin including recommendations for revising water quality standards to reflect national goals of swimmable water, where attainable, and establishing priorities which will be the basis for awarding grant assistance and taking other steps including non-point source controls to achieve water quality goals.

- o Scheduling action--setting forth compliance schedules or target abatement dates and indicating necessary State and local activities such as timely permit processing and construction grant awards.
- o Coordinating planning--establishing goals and identifying needs for other planning activities, i.e., local 201 facility plans, 208 areawide plans, 209 Level B basin plans, and other water resource related plans, and reflecting the results of those activities.

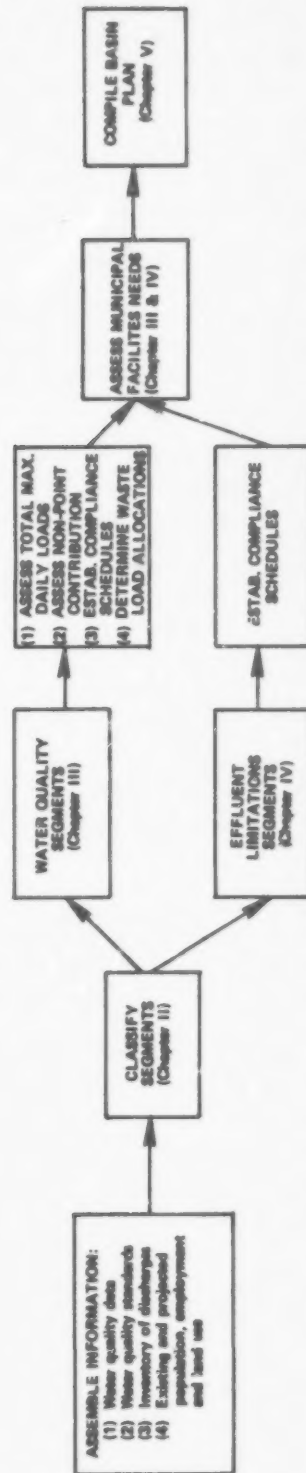
The basic steps to accomplish this planning are set forth in these guidelines. A summary of the basic planning system is shown in Table 1.

B. Scope and purpose.

A basin plan is a water quality management plan for the streams, rivers, lakes, and tributaries and the total land and surface water area in one of the basins defined by EPA, or any other basin unit agreed upon by the State(s) and the Regional Administrator(s). In the case of Interstate areas, the basin plan should conform to the basin plan of the neighboring State. The purpose of the plan is to coordinate and direct the State's water quality decisions on a river basin scale. The plan is neither a broad water and related land resources plan nor a basinwide facilities plan. It is a document that identifies and then sets forth measures to correct the basin's water quality problems including a determination of existing water quality; recommendations for revision of water quality standards; and determination of significant point and non-point sources of pollution. The basin plan sets forth a remedial program for those problems including effluent limitations or other control strategies; identification of 201 facility planning; designated 208 areawide planning needs; priorities for municipal facilities planning and for construction grants; and the timing of the plan implementation. Such actions should lead to an effective approach to pollution control in that basin.

Except in the simplest of situations, basin planning is conducted through the analysis of individual segments (see 40 CFR 130.2(m)) as described in Chapters II, III, and IV of these guidelines. The classification of a segment determines the order and level of planning for the segment. This classification is discussed in detail in Chapter II. The basin plan is the result of aggregating the individual segment analyses.

TABLE 1
BASIC PLANNING SYSTEM FOR 303(e) PLANS



Basin management planning and actual water quality management in the basin are continuing, integrated processes for taking immediate program actions. The basin plan will be periodically reviewed as additional information and knowledge are obtained, initial objectives are accomplished, other planning is completed, and available resources and capabilities increase. The plan will be expanded and strengthened over time to produce sounder management decisions and direct further abatement actions, such as non-point source control alternatives. This emphasis is not designed to preclude early non-point source abatement considerations. It does mean, however, that point source abatement considerations must be scheduled in the basin plan; non-point source actions can be delayed until later revisions of the plan.

Basin planning during fiscal years 1974 - 1975 will be primarily directed toward managing the abatement and control of point sources of pollution in the basin for the immediate five year period, with particular emphasis on the issuance of NPDES permits, and toward laying the groundwork for subsequent planning. The basic objectives of plans during this period are:

- o To establish effluent limitations and compliance schedules or target abatement dates for point sources, leading to achievement of existing water quality goals;
- o To identify municipal waste treatment facilities needs;
- o To direct construction grant awards on an abatement priority basis leading to implementation of those limitations and schedules;
- o To identify and schedule further needed actions, including localized planning and additional data collection.

Basin plan revisions after July 1, 1975, shall consider where changes have occurred, current actions with respect to the most recent data or analysis and shall concentrate, if appropriate, on the identification and evaluation of methods and procedures (including land use requirements) to control, to the extent feasible, non-point sources of pollution.

The basin planning steps described in 40 CFR Part 131 and further discussed in these guidelines are necessary to

accomplish these management objectives properly. These objectives will be programmed on a yearly basis in the annual State strategy (see Section 106 of the Act and 40 CFR Part 35, Subpart B). The information developed will also help to identify the basin's longer range planning needs.

C. Relation with other plans.

Three types of water quality plans are provided by law: basin planning (Section 303(e)); facilities planning (Section 201); and designated areawide waste treatment management planning (Section 208).

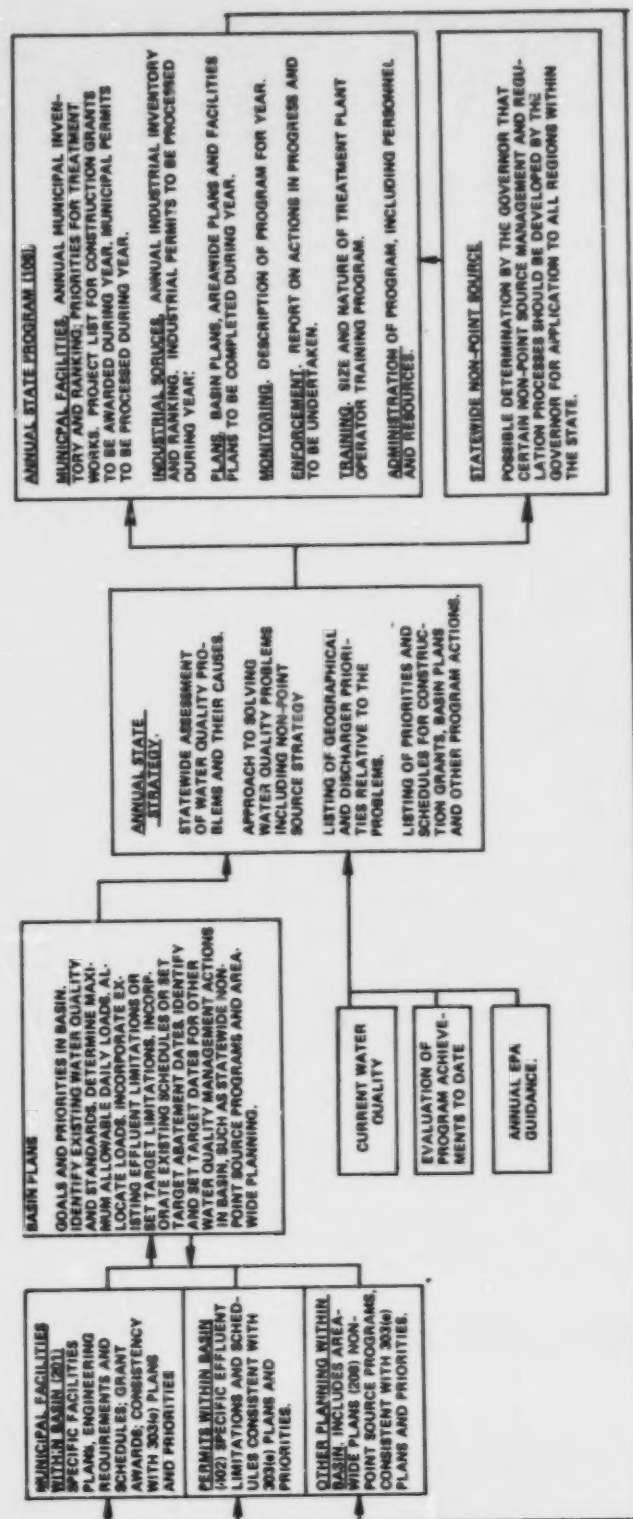
Basin plans are the water quality management plans for the waters of the State. Together they provide, Statewide, an analysis of water quality and waste source problems and a description of remedial actions. Their primary use is as a management guide for area actions such as grant awards and the identification of needed intensive local planning. Development of basin plans is an integral part of the State water quality planning process. Table 2 depicts the interrelationships of the planning process.

In contrast with the Statewide character of basin planning, facilities planning under Section 201 of the Act and areawide waste treatment management planning under Section 208 are limited to geographical areas under local jurisdictions. In considering treatment or control requirements, they study the cost effectiveness of alternative waste treatment management techniques and systems. Section 201 planning is directly related to a publicly owned treatment works to be constructed with Federal grant money; Section 208 provides comprehensive planning and regulation in an area having substantial water quality control problems and must result in a wastewater management program covering all point and, if appropriate, non-point sources of pollution in that area.

The need for 201 and 208 planning may be identified through the basin planning analysis, and 201/208 plan objectives must be consistent with objectives established by the plan for the basin in which they are located. Correlatively, basin plans and revisions to basin plans pursuant to the continuing planning process must reflect the objectives and goals of completed 201 and 208 plans.

In addition to the three types of water quality plans, Section 209 directs the Water Resources Council to prepare comprehensive, interdisciplinary water and related land plans for all regions or river basins in the United States

TABLE 2
ANNUAL STATE PLANNING AND MANAGEMENT ACTIONS



by January 1, 1980. These Level B studies are prepared to address complex long range problems. 208 areawide plans and basin plans should be consistent with complete Level B studies.

D. Timing of planning.

1. Timing between types of planning.

Implementation of the planning and management provisions of the Act is, by law, sequenced over time. The development of the 303(e) process was required within 120 days of enactment (October 13, 1972), and NPDES permits are to be issued by December 31, 1974. The allocation of wastewater discharge loads is required by FY 75. Areawide planning is to be underway before FY 76. Thus the Act places initial impetus on the State planning processes and basin plans. A framework is to be developed for the increasingly complex planning schedule to follow.

Basin plans and facilities plans are interdependent. Facilities investment factors such as the number, location and magnitude of waste discharges in the basin will be addressed in basin plans. By contrast, areawide planning involves a delayed start-up and additional complex planning determinations. Areawide planning will be directed toward the law's longer range goals, including achievement of the levels of treatment required for July 1, 1983.

2. Timing among various basin plans.

All basin plans must be submitted by July 1, 1975, unless an extension has been granted by the Regional Administrator pursuant to the State/EPA agreement on level of detail and timing of basin planning as outlined in Section E, below. The timing for completion of individual basin plans will vary according to the severity of water quality problems in the planning area and other factors as the State in agreement with the Regional Administrator may deem appropriate. Factors may include plan complexity or the number of sources in an area that are high on the State's municipal and industrial priority list. The schedule of plan preparation developed as a part of the continuing planning process will establish basin plan completion dates.

3. Timing of basin plan coverage and revision.

A basin plan should present basinwide goals to be achieved within a 20 year time frame and should detail the

management actions necessary for the immediate 5 year period. Completed basin plans must be revised at least every five years, including revisions to reflect new information from facilities plans, permits, or additional monitoring and surveillance. Required Management actions must also be updated for the immediate 5 year period (see 40 CFR §131.505). Revisions on a more frequent basis should be made where significant changes occur. Revisions to plans should be expanded to include all elements required by §131.202 of the regulations.

E. State/EPA agreement on level of detail and timing of basin plan preparation.

The level of detail of planning for the basin planning elements described in §131.201 and in Table 3, Chapter II of these guidelines, should be determined by an agreement between the State and the appropriate Regional Administrator. In addition, the agreement should specify the timing for basin plan preparation, particularly where basin plans will be submitted after July 1, 1975. The State will provide a proposed schedule for basin plan preparation and proposed level of detail of basin planning as part of the annual State strategy. Approval of the Section 106 State program including the State strategy will serve as approval of the schedule and level of detail of basin planning.

F. Definitions.

Certain terms used frequently in these guidelines require a brief explanation. The regulations contain further definitions. (See 40 CFR §130.2).

1. "303(e) plans", "basin plans" and "water quality management plans" are the same--they all refer to the plans described in these guidelines.

2. "Water Quality segments" are segments where it is known that water quality does not meet applicable water quality standards and which is not expected to meet water quality standards even after the application of the effluent limitations required by Section 301(b) (1) (A) and 301(b) (1) (B) of the Act.^{1/}
3. "Effluent Limitation segments" are segments where water quality is meeting and will continue to meet applicable water quality standards or where there is adequate demonstration that water quality will meet applicable water quality standards after the application of the effluent limitations required by Section 301(b) (1) (A) and 301(b) (1) (B) of the Act.
4. "Significant discharge" means any point source discharge for which timely management action must be taken in order to meet the water quality objectives for the basin within the period of the current plan. The significant nature of the discharge is to be determined by the State but must, as a minimum, include any discharge which is causing serious or critical water quality problems relative to the segment to which it discharges.
5. "Loads" or "loadings" are quantities of pollutants in the water. The total load is an instream amount; the total maximum daily load is the amount which may be added by all sources (without violating water quality standards); load allocation refers to the amount of the total maximum daily load which, it is determined, may be added by an individual source. The load allocations are reflected in the effluent limitations (defined in §130.2) assigned to individual point sources.

^{1/} The effluent limitations required by Sections 301(b) (1) (A) and (B) are base level limitations consisting generally of best practicable control technology currently available (BPT) for industrial point sources and secondary treatment for municipal sources. BPT and secondary treatment are defined in regulations issued by the Administrator.

6. "Targets" are goals. They are not directly enforceable but become binding when incorporated into a permit or other Federal or State regulatory mechanism. For example, a target abatement date is a single date when it is expected that needed remedial actions will have been completed. This is in contrast with a permit's schedule of compliance, which is a formal, binding sequence of dates for implementing specific actions (See Section 502(17) of the Act).
7. "Milestones" are interim dates in a schedule of compliance or other action timetable. Their inclusion allows measurement of progress towards achievement of the final objective (requirements for permit schedules of compliance are set forth in 40 CFR §124.44).
8. "Municipal needs" means the total capital funding required for construction of the publicly owned treatment works which are required to meet national water quality objectives as reflected in Section 301 and 302 of the Act (§130.2(i)). The estimate of needs is the basis for allocation of Federal construction grant monies under Section 205.

TABLE 3
BASIN PLANNING ELEMENTS

	Water Quality Segments	Effluent Limitation Segments
1. Inventory and ranking of significant dischargers	X	X
2. Schedule of compliance or target dates	X	X
3. Assessment of municipal needs	X	X
4. Determination of total maximum daily loads	X	
5. Established or targeted load allocations and effluent limitations	X	
6. Assessment of non-point sources of pollution*	X	
7. Residual waste controls	X	X
8. Recommended water quality standards revisions	X	X
9. Planning relationships	X	X
10. Appropriate monitoring and surveillance programs	X	X
11. Interstate/Intergovernmental cooperation	X	X

*Non-point source contribution assessment and control measures may be done in effluent limitation segments, if necessary.

II. COMMENCING THE BASIN PLAN

Basin plans will be assembled from information developed by segment analyses. The basin planning system consists of three phases: (1) assemble information, identify segments, and classify segments; (2) analyze segments; and (3) compile basin plan. The first phase is described in this chapter, the second phase is discussed in Chapters III and IV and the third phase appears in Chapter V.

This chapter describes the steps to be taken in commencing the basin plan, including the classification of segments. Planning should proceed pursuant to the approved State continuing planning process. Citations in this chapter are to relevant regulations under Chapter 40 of the Code of Federal Regulations (see Appendix A). The applicable regulations should be consulted throughout the plan's preparation.

A. Assemble background information.

1. Assemble existing water quality data and note applicable standards.

Existing water quality and related hydrologic and hydraulic data may consist of outputs from ongoing State or Federal permanent monitoring stations or field surveys, from permit applications or other discharge-related data or from other sources. Data should be current and accurate. Applicable water quality standards should be noted.

In some segments, additional monitoring may be needed to classify the segment with certainty or to execute waste loads allocations. The following items should be considered.

- a. Select a tentative model to relate source loads to water quality (unless an existing, current model is available).
- b. Design, schedule and execute a data collection program (see Chapter III, Section I and 40 CFR Part 35, Subpart B, Appendix A).
- c. Classify the segment as either Effluent Limitation or Water Quality, and proceed according to the guidelines for those segments.

Water quality standards are to be reviewed at least once every three years. As reflected in Sections 303(c) and 304(a), the goal of the next revisions, where feasible, will be to set standards that protect aquatic life and primary contact recreation (swimming). Recommendations for revisions of water quality standards will be accomplished as part of the basin planning process. The segment analysis and/or the basin plan should consider the technical and economic feasibility of point and non-point source controls in relation to the desired uses and criteria. It is recognized that naturally occurring conditions or relatively uncontrollable non-point source pollution could result in failure to meet that goal. However, it is not intended that point source pollution, whether individual or aggregated, be the prevailing reason for not achieving a swimmable water standard.

2. Construct an inventory of significant dischargers.

The inventory of dischargers should identify and locate all significant dischargers. Existing information as to the amount, characteristics and treatment of the effluents from each significant source, including information from National Pollutant Discharge Elimination System ("NPDES") applications or permits, if any, should be described in the plan. Non-point sources may be deemphasized until after the first round of NPDES permits for point sources has been fully processed. The above inventories should include all sources which are required to obtain permits under the NPDES.

3. Assemble estimates of existing conditions and construct base line projections.

Estimates of the existing population, employment, and land use in the basin should be assembled as a basis for assessing existing patterns of the generation of pollutants and as a basis for projecting the amount and spatial distribution of future waste loads. Population data are available from the Bureau of Economic Analysis (U.S. Department of Commerce). Land use data should be obtained from official planning agencies within the basin. To the extent possible, in-stream quality data assembled pursuant to Sections A and B of this chapter should be combined with population, employment, and land use data to construct a materials balance for each significant pollutant to provide a basis for identifying the most significant sources of pollution within the area.

Base line projections of population, employment and land use should be assembled if available or otherwise constructed. The projections provide a basis for making projections of future patterns of waste load generation. These projections should cover the next 20 years in 5-year increments. They should be consistent with the most recent demographic and economic projections developed by the Bureau of Economic Analysis (U.S. Department of Commerce) and the Economic Research Service (U.S. Department of Agriculture) and with projections used as a basis for State planning for air quality management. The use of any projections that deviate significantly from BEA should be justified. BEA projections are available for States, BEA economic regions, Water Resource Council Regions, and for Standard Metropolitan Statistical Areas, all of which generally include more than a single county. If it is necessary to disaggregate BEA projections, the assumptions made in the disaggregation process should be made explicit. Historical trends of county population and employment data are available upon request from BEA. Land use projections should be assembled with the assistance of officially designated planning agencies in the area.

Using these projections and the best estimates of waste load generation per unit of activity, project the incremental impact of a five year growth in waste loads from residential, commercial, industrial, and non-point sources. To assure that the plan is consistent with longer range development as well as providing for water quality management during the immediate five year planning period, these projections should cover the next twenty years in five year increments.

B. Identify and classify segments.

In the basin plan each segment must be classified as either "Water Quality" ("WQ") or "Effluent Limitation" ("EL") in accordance with the definitions contained in Chapter I, Section E of these guidelines.

The classification of a segment determines the intensity, or level, of planning required. Water Quality segments will require more effort than Effluent Limited segments. Table 3 outlines the work which should be completed for each type of segment.

The segment classifications submitted in each State's continuing planning process were derived from a classification procedure which made allowances for inadequate data. Using the information described in

paragraphs A(1) through A(3) above, the preliminary classifications should be confirmed or changed. The final segment classifications are necessary to perform segment analyses; all segment analyses must be completed before basinwide management decisions can be made.

C. Determine order of segment analyses.

The primary purpose for analyzing segments is to develop the information required to write the municipal and industrial discharge permits. Because all first round permits should be issued by December 31, 1974, and because the analysis of Water Quality segments will require considerable time and effort, initial emphasis should be placed on completing the Water Quality segment analyses as soon as possible.

III. WATER QUALITY SEGMENT ANALYSIS

Each Water Quality segment analysis should be prepared as described in this chapter. Citations are to the relevant sections of 40 CFR Part 131 (see Appendix A to these guidelines), which should be consulted throughout the segment analysis.

By definition, Water Quality segments will be in violation of water quality standards even after all point discharges receive treatment at least as stringent as required by Section 301(b) (1) of the Act. Violation of standards in these segments is caused either by point sources which must be subjected to controls beyond best practicable treatment ("BPT")/secondary treatment or by non-point sources which must be controlled. The objective of Water Quality segment analysis is to determine the most effective allocation of waste loads between all point and non-point discharges, such that water quality standards are met.

The analysis should be completed for each parameter which is in violation of water quality standards. Each source contributing that parameter to the segment should be identified and alternative remedial measures considered. The final treatment control strategy for the segment should reflect a combination of control methods which will meet water quality standards for all water quality parameters.

Modeling is generally the appropriate method of ascertaining total maximum daily loads and determining the effects of the proposed alternative abatement strategies. The modeling technique selected depends on the nature and complexity of the problem. The technique should represent the minimum level of sophistication needed to provide for reliable waste load allocations (see Appendix B).

Following the development and analysis of the above alternatives, the most effective waste treatment management strategy is to be selected for implementation in the segment. Detailed plans will be developed through 201 or 208 planning.

Planning in the segment should be consistent with national priorities as determined by the Administrator. EPA's annual "Water Quality Strategy Paper" also may be consulted for general statement of policy for implementing the requirements of the Act. Information respecting current priorities may be obtained from the Regional Administrator.

Planning for the segment should take into account any water quality or other applicable resource plan prepared or under preparation which involves all or any part of the basin. The basin plan of which the segment analysis is a part will identify and discuss such other planning activities in the basin.

A. Assemble data for the segment.

Assemble the data for the segment described in Sections II. A through II. C. This is the minimum amount of data needed to perform Water Quality segment analyses. Because some segments are more complex than others, this data may be insufficient and may require further surveys within the segment. Deficiencies in data must be identified and corrected if the segment analysis is to be reliable (see Chapter III, Section I of these guidelines).

B. Determine total maximum daily loads. (§131.304)

Each water quality standards parameter being violated or expected to be violated in the segment should be identified and the total maximum daily loads of these pollutants which may be added to the water body by all point and non-point sources without violating the standard must be determined.

Each total load limitation must be at least as stringent as necessary to achieve the applicable standard under the critical water quality conditions prescribed by the standards and any conditions which should be anticipated in the individual situation, such as seasonal waste discharges. It must include provisions for seasonal variation and for a margin of safety which takes into account any lack of knowledge concerning the relationship between effluents and water quality as well as any uncertainty resulting from insufficient data, including data from non-point sources. Where thermal standards may be violated, thermal loads must be separately estimated as provided in §131.305. For all parameters the antidegradation principle applies (see Chapter IV, of these guidelines).

C. Categorize and rank significant dischargers. (§131.301)

An inventory of significant municipal and industrial sources and a ranking of significant municipal dischargers in the segment should be assembled from the inventory for the basin, checked for accuracy and completeness, and revised if necessary (see Chapter II, Section A, of these

guidelines). Significant municipal dischargers should be ranked in order of relative impact upon segment water quality. The inventory should reflect the relative importance of significant industrial dischargers and should be used for guidance in establishing the annual State strategy.

D. Assess non-point sources. (§§130.23, 131.306)

The segment analysis should assess the amounts and characters of pollutants from non-point sources identified in the area of the segment. The segment analyses should consider agricultural, silvicultural, mining related, construction activity related, salt water intrusion related and other non-point source pollution to the extent provided in §131.306. Abatement or control strategies for non-point sources should be evaluated. The evaluation should consider the technical, legal, institutional, economic and environmental impact and feasibility of alternative procedures and methods. Consistent with national priorities, these strategies should be developed as provided in §131.306 following completion of the initial planning required as a basis for permits. Additional guidelines on non-point source controls will be published.

E. Determine waste load allocation. (§131.305)

1. General considerations.

A waste load allocation for a segment is the assignment of target loads to point and, if appropriate, to non-point sources to achieve water quality standards in the most effective manner. It involves the selection of the best practicable water quality management alternative for the segment over a five year period while taking cognizance of longer range needs of the basin and of that particular segment. The waste load allocation will contain the major water related determinations for the area and must therefore be consulted for specific management actions, including the writing of conditions for NPDES permits and awarding construction grants.

The purpose of waste load allocations is to formally state the actions necessary to maintain or improve the quality of the affected waters. State and Federal water quality agencies must have waste load allocations in order (1) to establish a basis for assigning effluent limitations and issuing permits to individual dischargers in order to meet water quality standards and (2) to identify and provide a basis for ranking needs of municipalities for which

planning and possible construction of Federally-assisted facilities must be initiated within the next five years.

Since a basin plan is a management plan, it prescribes the abatement strategy for individual sources only generally. While the plan does not determine detailed engineering specifications for particular projects, some knowledge of alternative facilities and nonstructural alternatives and their associated costs is obviously required to develop feasible, effective allocations.

The allocations for each industrial or municipal discharger must either result in an attainable total effluent allowance or recognize that the restriction may result in the discharger being forced to close or reduce its operation to avoid being subjected to possible enforcement actions (through action on a permit or other enforcement mechanism under State law). To determine feasible limits the analysis must consider generally the alternative technical and economic capabilities available to each discharger. Where standards are being violated because of point source discharges, the technical requirements for some point sources may be beyond base level effluent limitations. The economic costs of the alternatives available to each source must be weighed. In addition, existing information on the trade-offs and total costs among combinations of alternatives for multiple sources must be reviewed in search of the mix of processes at all facilities which will result in the most efficient overall plan for achieving standards when all sources are in operation. Detailed consideration of technical and economic trade-offs between alternatives should be included in the 201/208 plans. Information obtained from the detailed analysis in 201/208 plans should be reflected in basin plans.

In developing waste load allocations, the following points must be considered:

a. Coordination with permits. (S131.310)

Effluent limitations established by any current permit issued prior to completion of the plan should be incorporated in the plan. For each discharger subject to the NPDES which has not been issued a permit, the analysis must establish target load allocations. Target allocations will generally be incorporated into any subsequently issued permit, subject to all rights of the permit applicant and other interested persons to contest the targets. They are not enforceable until

incorporated into a permit or otherwise made enforceable through State law or regulation.

b. Coordination with facilities planning.
(§131.309; 40 CFR Part 35, Subpart E.)

Facilities planning involves detailed planning directly related to the Federally assisted construction of municipal waste treatment facilities. Such plans provide for cost effective and environmentally acceptable municipal waste treatment or control by determining the best practicable alternative waste management system over time, its geographic coverage, its service of other area sources, including industrial sources, and the nature and amount of the planned discharge (load reduction achieved). These decisions for the specific facility will affect not only the source's load allocation requirements but also the total number of industrial and municipal sources contributing to the total load. Analyses of the segment and facilities planning are interdependent: the facilities plan cannot disregard the overall segment analysis, yet that analysis must respect the realities of individual facilities needs and capabilities, with particular attention to considerations of environmental needs, cost effectiveness, growth trends and available financing (see paragraph h, below).^{1/}

c. Relation to areawide waste treatment management.

The waste load allocation process will help to identify those areas where areawide waste treatment management planning (Section 208 of the Act) should be initiated. Waste load allocations and areawide planning should be coordinated. Areawide plans should be consistent with total loadings planned for the segment and basin.^{2/}

^{1/2/}The 201/208 plans, when completed, will supersede the applicable portion of the basin plan with respect to individual waste load allocations, schedules of compliance, and facilities needs assessment. The total waste load from the 201/208 planning area must, however, be consistent with the applicable basin plan and the 201/208 plan must be consistent with State and National goals and objectives.

d. Accommodation of future growth.

Growth trend information compiled for the segment must be considered and a determination made as to the load allotments, if any, to be reserved for future discharges. The allotment must be consistent with continuing achievement of standards and prevention of significant water quality degradation (see Chapter IV, Section B). The growth allotment should be separately displayed in the reported load allocation.

e. Non-point sources.

In allocating pollutant loads among point sources, the pollutant contribution from non-point sources must be considered to assure that the combined total will not exceed applicable water quality standards. Such contribution should be separately entered in the load allocation display. The long term point source load allocations may depend upon the abatement and control alternatives for non-point sources.

f. Upstream contribution.

The amount of pollutants entering the segment from upstream must be considered when determining whether the total of proposed individual point and non-point allowances exceeds the allowable maximum (see Chapter III, Section B). For purposes of notation and calculation, this contribution estimate necessarily involves coordination with planning for the upstream segment. The method of coordination, level of certainty regarding the estimated future load, and the time span covered is a matter of planning judgement.

Uncertainty in the waste load allocation process may consist of: (1) uncertainty with respect to growth projections; (2) a lack of knowledge of cause-effect relationships between effluents and water quality; (3) pending decisions with respect to the construction of reservoirs, withdrawals, and other developments which could significantly affect the assignment of effluent limitations; and (4) uncertainty as to the quality of the data being employed.

Growth projections.

Unanticipated growth occurring during the period covered by the plan could cause water quality conditions to deteriorate. The classification of some segments may change from Effluent Limitation to Water Quality, or in Water Quality segments higher levels of technology could be required to achieve standards. Since the rate of growth of waste loads is controlled by local decisions with respect to annexation, industrial expansion, sewer connection permits, etc., the plan's load projections and allocations must be reviewed with the responsible municipalities and industries.

Lack of cause-effect knowledge.

Uncertainty due to a lack of knowledge of the cause-effect relationships among waste loads and water quality must be taken into account in the waste load allocation process. Experience with cause-effect models in water quality is insufficient to provide a basis for specifying tolerance levels for prediction errors, but the use of sensitivity analysis is encouraged. Where the cost of errors is relatively small, factors of safety should be included; where the cost of errors is large, research and monitoring to reduce uncertainty should be included in the plan.

Pending development.

Where there is substantial uncertainty with respect to pending development decisions, allocations should be made under both the assumption that development will not occur and that the development will occur. Water quality implications of the proposed development should then be brought to the attention of the decision-makers concerned with the project.

Uncertainty as to the quality of data.

High levels of confidence in the data should exist where the costs of possible error are large. Lower confidence levels can be tolerated where the resulting costs of error are small. Additional confirmation of data should be sought where the costs of possible error are large.

2. Point source allocations according to extent of non-point source contributions.

The anticipated violations must necessarily result from one of three situations: pollution primarily from non-point

sources; pollution primarily from treatment plant effluents after the achievement of base level limitations; or pollution from treatment plant effluents and non-point sources of comparable magnitude. Allocations under each of these conditions should be as follows:

a. Dominant non-point.

Where water quality standards would not be achieved after the application of Best Available Technology (BAT) by point sources, and the remaining violations are predominantly caused by non-point sources, loads should be allocated to point sources according to BPT and secondary treatment limitations, since water quality would not be significantly improved through the application of higher effluent limitations. Recommendations for non-point controls should be included, and where these conditions occur in complex urban-industrial or other critical areas, 208 planning activities should be considered. Any statewide planning under Section 208 (b) (4) must be taken into account.

b. Dominant point.

Where pollution from point sources after the application of BPT and secondary treatment is the dominant cause of anticipated violations, loads should be allocated to achieve water quality standards in a cost effective manner, including allocations requiring higher levels of treatment or control. In segments where previously developed plans are available and up to date, these plans may be sufficient to assign waste loads to individual sources. In other segments evaluation of alternative load allocation strategies is necessary to determine the most cost effective strategy for achieving water quality standards. Waste loads should be allocated consistently with the preferred strategy.

c. Comparable point and non-point.

Where pollution from point sources after the application of BPT and secondary treatment and pollution from non-point sources-- which may include in place or accumulated pollutants--are of comparable magnitude, loads should be allocated in a manner similar to that outlined for dominant point areas, except non-point source control alternatives should be considered simultaneously with more stringent point

source effluent limitations. Again, evaluation of alternative strategies is necessary to determine a cost effective means of achieving standards. Point source loads should be assigned on the basis of the alternative selected. Recommendation for non-point controls should be included and when these conditions occur in complex urban-industrial areas, 208 planning should be considered. In the absence of any 208 planning, a target date for defining specific non-point source control programs should be established.

Evaluation of alternatives, where required, should be carried out only at the level of detail required to execute the waste load allocation process. The evaluation should not reach the level of engineering design, but should consider the non-structural alternatives.

F. Define effluent limitations for significant dischargers. (8131.305)

Effluent limitations, or target limitations, must be established for significant point sources in any Water Quality segment. Limitations must be set forth for every pollutant discharged by the source. Effluent limitations established in any current permit must be incorporated. Where no permit is in effect, target limitations must be formulated. The target limitations must be at least as stringent as necessary to meet the requirements of the Act and applicable regulations, and, for parameters for which load allocations are required, the load allocations established for each source.

The Administrator is publishing effluent guidelines defining secondary treatment for municipal facilities and best practicable technology for various classes and categories of industrial point sources. Copies of the guidelines and information regarding them may be obtained from the Regional Administrator. These guidelines may be used to prescribe target limitations for specific parameters if the resulting effluent will be consistent with the source's assigned load allocations. Stricter limitations must be developed where the base level restrictions would not result in compliance with the source's load allocation and with water quality standards.

G. Establish schedules or targets for dischargers. (8131.302)

Schedules of compliance or target abatement dates must be determined for point sources which are not currently in

compliance with the effluent limitations applicable to them and are not anticipated to be in compliance by January 1, 1975. If the State is participating in the NPDES, target dates for the processing of permits for any source which will not have been processed at the time of the basin plan completion must also be set forth.

Major milestone dates from the schedules of compliance established by current NPDES permits must be included in the segment analysis. Target abatement dates must be developed for all other significant sources and for any source having a permit with an incomplete schedule.

Each schedule of compliance or target abatement date should reflect stringent performance goals, to assure implementation of the plan's required effluent limitations in the shortest practicable time. However, all dates established by the plan must be realistic and feasible. The schedules or targets should provide for timely implementation of statutory goals of Section 301 whenever the Act's deadlines can possibly be attained. Any reasons for not meeting a schedule or target date must be documented by the discharger.

H. Assess municipal facilities needs. (8131.303)

The segment analysis must include an assessment of investment requirements for municipal waste treatment or control in the segment. This assessment becomes part of the bi-annual report to Congress on municipal needs which presents investment requirements on a State-by-State basis and governs subsequent annual construction grant appropriations. Furthermore, the assessment is one of the elements used in determining, reviewing and revising the State municipal priorities list which determines the order of construction grant awards and hence the available Federal contribution to financing. A comparison of the municipal needs with expected appropriations will indicate generally the date when implementation will be feasible.

1. Summary of requirements.

The Administrator is required to report to Congress biennially on the municipal needs of each State. Allocation of each year's Federal construction grant funds among individual States, which depends on that State's municipal needs relative to the needs of all States, is based on the biennial report.

Reports are filed on February 10 of odd-numbered years. The first report, filed February 10, 1973, was based on an ad hoc 1973 Survey of Needs (Form No. OMB 158-R0017) which was filled out by State agencies and approved by the Regional Administrators. This report was based on best estimates by responsible officials. Another interim survey will be conducted and submitted to Congress on September 3, 1974. Subsequent reports will be developed pursuant to the State's continuing planning process.

Within the State, allocation of the total grant share to individual projects is determined pursuant to an established system of priorities, prepared as follows. First, the State develops, pursuant to its planning process, a municipal discharge inventory consisting of an inventory and ranking, in order of priority, of significant municipalities. The list includes all municipalities which do not meet applicable requirements of Sections 301 and 302 of the Act. Based on the inventory, the State prepares an annual project list, showing all projects for which Federal assistance will be requested from current allotments. The Administrator will award grants only to those proposed projects which have received a priority certification consistent with the approved State system. The municipal inventory and project list are integral parts of the annual State program, Section 106 (see generally, 40 CFR §§35.554--3(b)(1), 35.915 and 130.43).

The identification of municipal needs should be oriented towards meeting the provisions of Sections 301 and 302 of the Act. It should be premised on the phased achievement, by all municipal sources, of secondary treatment, or higher treatment needs in Water Quality segments to meet water quality standards, and on subsequent compliance with the best practicable waste treatment technology requirements of Section 201(g)(2)(A) (see Section 301(b)(2)(B)). Where needs are established on the basis of water quality considerations--either because the effluents of the municipality are contributing to a Water Quality segment problem or by reason of a Section 302 proceeding--the source's effluent reduction requirements will be determined through load analysis, discussed above.

2. Cost estimates for municipal facilities.

Plans developed under Section 303(e) will provide the mechanism for estimating State municipal needs. The assessment of municipal facilities investment requirements shall include:

- a. Load reduction to be achieved by each facility and whether this reduction is required to attain and maintain applicable water quality standards and effluent limitations.
- b. Population or population equivalents to be served including a 20 year forecast of such population.
- c. Types of facilities needed and their investment costs derived from approved 201/208 plans or facilities designs and specifications.
- d. In the absence of the above plans and designs, an indication of facilities required to be considered as an option under future 201/208 planning and preliminary estimates of their costs.

The estimate of costs resulting from the needs survey does not constitute a final decision governing 201 or 208 planning efforts, particularly where needs were based upon preliminary costs as estimated in (d) above. Rather, they represent the best initial estimate for the future project, to be used in the interim and subsequent biennial reports to Congress in the absence of better estimates.

Each year, the States needs estimates, as contained in the 303(e) plans, will be further refined, through the continuing planning process and the completion of additional 201 and 208 plans. Future revisions to 303(e) basin plans should reflect refinement of cost estimates contained in completed 201/208 plans. Thus the State will continue to acquire and refine demographic data and population and employment projections. These will support waste load forecasts for Water Quality segments, leading to determination of required discharge restrictions, and more accurate needs estimates.

Since municipal needs, whether developed through the planning process or through specific 201/208

planning, in turn influence subsequent planning decisions, the continuing planning process and the production of needs estimates are integrally related and mutually supportive.

IV. EFFLUENT LIMITATION SEGMENT ANALYSES

In Effluent Limitation segments, either water quality is and will continue to be at least equal to applicable water quality standards or, where water quality does not meet the standards, it will do so after the application of best practicable control technology by industrial sources, secondary treatment by municipalities within the segment, and compliance by upstream sources with requirements applicable to them.

Effluent limitations for dischargers in EL segments are based primarily on technology. It may become necessary in some instances to relate the effluent limitations of individual dischargers to water quality where anticipated growth might cause significant degradation in water quality even though standards would not be violated (see Section B below).

Segment analysis in effluent limitation segments accomplishes a variety of important objectives:

- o It establishes an orderly, visible water quality management scheme for the segment.
- o It describes existing water quality as a basis for preventing degradation.
- o It sets forth a coordinated, prioritized schedule of compliance for all significant sources in the segment.
- o It produces an inventory of dischargers in the segment for use in formulating the annual State strategy which in turn is used to schedule construction grant awards and to set forth the State's monitoring and surveillance program for the year.
- o It provides an assessment of needs for municipal waste treatment or control in the segment.

Planning for each segment should take into account any water quality or other applicable resource plan prepared or under preparation which involves all or any part of the basin. The basin plan of which the segment analysis is a part will identify the relationship, indicate the current status, and describe the extent of complimentary influence of such other planning activities in the basin.

Planning for each segment should be consistent with national priorities as outlined in the annual "Water Quality Strategy Paper." Information respecting current priorities may be obtained from the Regional Administrator.

Each Effluent Limitation segment analysis should be prepared as described in this chapter. Planning should proceed pursuant to the approved State continuing planning process. Citations are the relevant Sections of 40 CFR Part 131 (see Appendix A to these guidelines), which should be consulted throughout the segment analysis.

A. Describe existing water quality and applicable water quality standards.

Existing water quality and related hydrologic and hydraulic data, and the water quality standards applicable to the segment or legal citation to such standards, should be assembled from the data and standards of the basin (see Chapter II, Section A(1), of these guidelines).

B. Analyze projected water quality for compliance with antidegradation principles.

Among the features of the Act which compensate for growth, and therefore contribute to the maintenance of water quality, are:

- o The progress of existing source technology standards from BPT and secondary treatment to BAT and BPWTT.
- o Revisions in effluent standards as new technology is demonstrated.
- o The upgrading of water quality standards to 1983 uses and criteria.
- o Environmental impact statements for new source permits, and for any construction of publicly owned treatment works with Federal funds.
- o Comprehensive areawide waste management authority under Section 208, including the authority to control land use.
- o The assurance of adequate opportunity for public comment and hearings on actions involving possible degradation.

These measures protect water quality from deteriorating below designated use levels. By 1983, they will generally protect water quality from deteriorating below the criteria for fishing and swimming. They may not protect waters which are currently above these criteria from being degraded to those levels, however.

EPA is considering the appropriateness of national guidelines on antidegradation that would take into account the ways in which some States already approach the problem. These include:

- o A zoning of waters which permits no discharge of any kind (point or non-point) in certain waters; this is, in effect, a land use measure--it may occur under the Wild Rivers Act or as part of a State program to protect waters of scenic or recreational value.
- o The allowance of additional discharges, provided each is at least equal to the quality of the receiving waters.
- o The provision for growth up to an established maximum stream loading; the allowable load, in turn, may be calculated against existing high water quality, or against a percentage deterioration of water quality. However, in no instance would the degradation result in a use less than that specified for 1983 under the Act.

The key elements of an antidegradation policy are a baseline for water quality, a definition of degradation to be applied against that baseline, and a control strategy to insure compliance with the definition. Existing water quality should be described in the plan. Estimates should be used where existing data are insufficient and additional data cannot be readily obtained.

C. Categorize and rank significant dischargers. (8131.301)

An inventory of significant municipal and industrial sources and a ranking of significant municipal dischargers in the segment should be assembled from the inventory for the basin checked for accuracy and completeness, and revised if necessary (see Chapter II, Section B of these guidelines). Significant municipal dischargers should be ranked in order of abatement priority. The inventory should reflect the relative importance of significant industrial

dischargers and should be used for guidance in establishing the annual State strategy.

D. Assess municipal facilities needs. (§131.303)

The segment analysis must include an assessment of investment requirements for municipal waste treatment or control in the segment. This assessment should be developed in the same manner as employed in Water Quality segments (see Chapter III, Section H, of these guidelines).

E. Establish compliance schedules or targets for significant dischargers. (§131.202)

A schedule of compliance or target abatement date must be determined for each significant point source which is not currently in compliance with the applicable effluent limitations and is not anticipated to be in compliance by January 1, 1975. Schedules of compliance or target abatement dates for Effluent Limitation segments are developed under the same principles as control scheduling in Water Quality segments. If the State is participating in the NPDES, target dates for the processing of permits respecting covered sources must also be set forth for Water Quality segments.

F. Assess non-point sources.

Consideration of agricultural, silvicultural, mining related, salt water intrusion related and other non-point source pollution, as provided in §131.306, is desirable, but generally it is not required in EL planning since by definition water quality in EL segments will meet applicable water quality standards without additional controls on non-point sources.

V. ASSEMBLING THE BASIN PLAN

The basin plan consists of two major components--the basinwide information derived from or in support of the individual segment analyses, and the individual segment analyses. These components should be assembled in a single package as described in this chapter. Each basin plan must include the following basinwide components.

A. Maps.

1. A map of the State showing the basin in relation to other basins, including portions of other States as necessary to show any interstate coordination area.
2. A map or maps delineating the basin and identifying its segments. The classification of the segments should be indicated on the map (see also Section C, below).
3. A map or maps of each segment identifying and locating significant dischargers and monitoring stations.

B. Recommendations for revising water quality standards.

The Federal Water Pollution Control Act Amendments of 1972 provide for review and revision of water quality standards on a continuing three year cycle. The first reviews and revisions were to establish interstate and intrastate standards for all navigable waters which would be in compliance with the Act as in effect immediately prior to the date of enactment of the FWPCA Amendments of 1972 (see Sections 303(a) and 303(b)). Guidelines were published in January 1973 (amended in April 1973) calling for the establishment of standards which would meet the criteria for aquatic life and secondary contact recreation uses.

Information should be assembled and testimony taken on the desirability and feasibility of establishing a swimmable water standard during the public hearings on completed basin plans. Where such information has not been assembled, due to delay in completion of the basin plan or insufficient data for non-point or natural sources of pollution, the basin plan should specify the schedule which will be followed to meet the requirements of Section 303(c) and 304(a). Additional guidance will be published shortly to implement the provisions of Section 303(c) and 304(a).

Applicable water quality standards for the basin and recommendations for revision to water quality standards if identified in the individual segment analyses need not be repeated in the basinwide statement. Standards for the basin must be reviewed at least once every three years, pursuant to Section 303(c) of the Act and 40 CFR §131.308.

C. Segment classification.

The basin plan should contain a list showing the classification of each segment in the basin, pursuant to §130.11 (see Chapter II and Section A above). The segments should be listed in order of abatement priority, pursuant to §130.41. The system for ranking segments in the basin should be consistent with the criteria for statewide ranking of segments and applicable priorities.

D. Priorities.

The basin plan should identify and explain any deviation from national priorities as described in the annual "Water Quality Strategy Paper."

E. Industrial discharge inventory.

The basin plan should contain an inventory and categorization of industrial dischargers in the basin. Significant dischargers should be ranked in order of abatement priority; the ranking should be consistent with the system for the State Industrial Discharge Inventory (see §130.44). The basin inventory should be aggregated from the individual segments lists and should be consistent with the priorities set forth in those lists (see Chapter III, Section C; Chapter IV, Section C). The basin inventory will be used by the State in developing the Statewide inventory.

F. Municipal discharge inventory.

The basin plan should contain an inventory and ranking of municipal dischargers in the basin. Significant dischargers should be ranked in order of abatement priority; the ranking should be consistent with the system for the State Municipal Discharge Inventory (see §130.43). The basin inventory should be aggregated from the individual segment lists and should be consistent with the priorities set forth in those lists (see Chapter III, C; Chapter IV, C). The basin inventory will be used by the State in developing the State inventory.

The basin plan should also show the municipal facilities investment needs in the basin (see §131.303; see also Chapter III, H and Chapter IV, E.)

G. Permit issuance target dates.

If the State is participating in the National Pollutant Discharge Elimination System, each basin plan should include a list indicating target dates for the processing of permits respecting any covered sources which will not have been processed at the plan's completion. This list should be compiled from the individual segment analysis lists (see Chapter III, G; Chapter IV, F).

H. Non-point sources.

The basin plan should provide for consideration of non-point sources where appropriate. Consistent with national priorities, if planning resources are limited, non-point source planning should not be pursued to an extent which would substantially curtail planning for point sources subject to the NPDES.

The Governor of a State may determine that a State-managed process to identify, evaluate and develop control alternatives for non-point sources is needed in order to be consistent with a statewide regulatory program. In this case, the Governor should notify the Administrator that the State intends to complete a non-point source control program that will be applied to all Regions within the State (see Section 208(b) (4) of the Act).

The plan should include target dates for the future consideration of non-point sources. Full compliance with §131.306 may be initiated after July 1, 1975.

I. Land use policies and controls. (§131.306)

The basin plan should describe the extent to which land use decisions can be influenced to complement and reinforce the control actions required to meet water quality goals as well as the development of sound program management. Each plan shall set forth any procedures established to assure land use relationships have been given adequate consideration in the development of the plan. Additional guidelines on land use policies and controls will be published.

J. Disposal of treatment plant residuals. (§131.307)

The basin plan should include the controls to be established over the disposition of all residual wastes from any municipal, industrial, or other water or wastewater treatment processing, whenever the processing or disposal occurs within the basin. The basin plan should establish a process to control land and/or subsurface disposal of pollutants that cause or may cause violation of water quality standards or where the disposal materially affects ground water quality. Additional guidance on this subject will be published.

K. Refine monitoring programs and data. (Part 131, Subpart D and 40 CFR 35, Subpart B, Appendix A)

Each segment should be included in the State's monitoring program. A program to monitor total stream discharge loadings and instream water quality in each Water Quality segment in the basin must be included in the basin plan. Initial monitoring efforts should be directed primarily towards acquisition of data needed to allocate loads and issue NPDES permits in Water Quality segments by December 31, 1974. Subsequent monitoring may also be directed towards non-point source analysis and controls. The requirement for intensive surface water monitoring surveys (beginning with Fiscal Year 1975) should be adequate to support the State's continuing planning process and the annual State program plan.

L. Relationship with other plans.

The basin plan should identify all water quality or other applicable resource plans which involve all or any part of the basin. These plans would include the plans described in §131.309, any major water resource planning by the Corps of Engineers or other authorities, and any cluster analyses undertaken in the absence of a completed segment analysis. The basin plan should include the information required pursuant to §131.309.

M. Legal basis of plan; Enforcement.

The basin plan should set forth briefly the legal basis of the plan, including the basis for enforcement of schedules of compliance pursuant to §131.302.

N. Certifications.

The basin plan should include the assurances and certifications by the Governor or his designee, required pursuant to §131.5C1.

O. Individual segment analyses.

The separate analyses of each segment in the basin plan must be included as an appendix to the basin plan. Segment and basin information may be presented in any manner adequate to enable public and governmental information and review and to serve as a guide for ongoing water quality management.

APPENDIX A

federal register

MONDAY, JUNE 3, 1974

WASHINGTON, D.C.

Volume 39 ■ Number 107

PART II



ENVIRONMENTAL PROTECTION AGENCY

■

WATER QUALITY MANAGEMENT BASIN PLANS

Policies and Procedures

Title 40—Protection of the Environment
CHAPTER I—ENVIRONMENTAL
PROTECTION AGENCY

PART 130—POLICIES AND PROCEDURES
FOR STATE CONTINUING PLANNING
PROCESS

The purpose of this notice is to amend 40 CFR to add a new Part 130—Policies and Procedures for State Continuing Planning Process. On March 27, 1973, notice was published in the *Federal Register* (38 FR 8034) that the Environmental Protection Agency (EPA) was proposing, in the form of interim regulations, policies and procedures for the State Continuing Planning Process pursuant to section 303(e) of the Federal Water Pollution Control Act, as amended; Pub. L. 92-500, 98 Stat. 816 (1972); (33 U.S.C. 1251 et seq.) (hereinafter referred to as the Act).

Section 303(e) of the Act requires each State to submit a continuing planning process which is consistent with the Act. Following the publication of the interim regulations of March 27, 1973, and prior to the publication of these final regulations, every State received EPA approval of a State continuing planning process. These final regulations, which describe the necessary elements of a State's continuing planning process, therefore provide policies and procedures for review, revision, and approval of a State's continuing planning process in accordance with §§ 130.52 and 130.54. In addition, these regulations also provide a mechanism for States to satisfy the Statewide responsibilities of section 208(b)(2) (F thru K) and sections 303(d) (Critical waters and total maximum daily loads); 305(b) (State reports on water quality and related information, including non-point sources); 314(a) (Clean lakes); 516(b) (Federal/State estimate of publicly owned treatment works construction needs); and they provide data for 104(a)(5) (Federal report on water quality).

Goals. The broad goals of the continuing planning process are to provide the States with the water quality assessment and program management information necessary to make centralized coordinated water quality management decisions; to encourage water quality objectives which take into account overall

State policies and programs, including those for land use and other related natural resources; and to provide the strategic guidance for developing the annual State program submittal under section 106 of the Act.

Purpose of the State process. The specific purpose of the State continuing planning process is to provide a mechanism for development of a State's program submittal under section 106 of the Act. This will be accomplished by developing an annual State strategy, which will be based upon basin plans where they are completed and upon other available information where the plans are not completed.

The annual State strategy will assist the State:

In directing resources-planning, monitoring, permitting, and financial assistance against water quality problems on a priority basis.

In establishing a coordinated schedule of action.

In reporting on progress in achieving program targets and scheduled milestones.

In providing the analysis required to revise water quality standards and to insure that applicable water quality standards are attained.

In specifying the requirements for, and scheduling the completion of, section 303 basin plans for all waters.

In determining the impact of non-point sources of pollution on State water quality and, where feasible, developing methods and procedures to control such sources on a statewide basis.

In insuring public participation in the development of the planning process and of basin plans.

The scope and timing of a basin plan for a specific planning area will be tailored to the problems of the area. No process should require individual basin plans to be more detailed than is necessary for sound water quality management.

Federal properties, facilities, and activities are subject to Federal, State, interstate, and local standards and effluent limitations for control and abatement of pollution. The State's planning process should include provision for Federal sources. It is contemplated that Federal

agencies will provide information to the States in accordance with procedures established by the Administrator.

Relationship of the continuing planning process and the section 106 State program. State water quality management is formed through the annual section 106 State program submission. The program, consisting of a State strategy, output commitments, reporting, and evaluation, is a sequenced year-round process, as illustrated in the following figure. The cycle begins with the submission of the annual strategy, followed by the annual section 106 program submission. A semi-annual evaluation and reporting of accomplishments completes the cycle.

Basin plan contents. Companion regulations under Part 131 of this chapter, describe requirements for the preparation of basin plans pursuant to the States' continuing planning process: Part 131 regulations should be consulted during the review and revision of the continuing planning process under this Part 130.

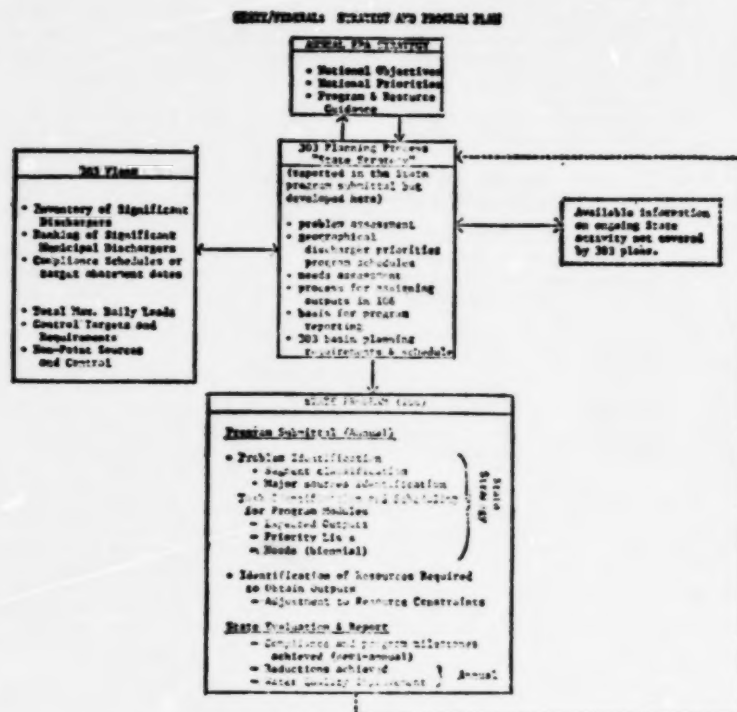
Comments on Interim Regulations. A total of 24 written comments were received, seven from States, four from public and private utilities, three from planning organizations, four from public interest groups and the remaining from consultants, industry and other interested individuals. A number of verbal comments also were received. In addition, a task force comprised of representatives of eight State Water Pollution Control Agencies and three EPA Regional Offices reviewed the final draft and made comments and suggested language changes, as needed. The EPA has carefully considered all submitted comments. The comments ranged from those desiring more stringent requirements to those who believed that these regulations could be better handled under other sections of the Act. There was only one comment opposed to the regulations, by an industrial group.

The policy decisions have been reviewed with representative States. The EPA revised the regulations to reflect most of the concerns raised, by either adopting the comment or substantially satisfying it through editorial changes and deletions from or additions to the regulations.

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a. Many commenters indicated that the term "significant discharger" was not well defined in the interim regulations. In addition, using only significant dischargers to formulate State municipal discharge inventories would not satisfy the legal requirements of the construction grants program. The regulations continue the use of the term "significant discharger"; however, its meaning has been clarified to include those dischargers for which timely management action must be taken in order to meet water quality objectives for the basin within the period of the current plan, where the States deem it appropriate to include them. The intent is to restrict the significant dischargers to those requiring control action during the span of the plan.

b. Several comments expressed concern that adequate time to develop basin plans was not allowed by the July 1, 1975, deadline. Although the 1975 deadline has been retained, the Regional Administrator is authorized to grant an extension.

c. Editorially, wording was modified somewhat to reduce duplication of language contained in Part 131 of this Chapter.

d. The level of detail and timing of basin plan preparation is to be determined by a State/EPA agreement that will be submitted as part of the annual State strategy in the Section 106 State program plan. Submission of the level of detail and timing agreement for Fiscal Year 1975 will be accomplished as a part of the revision of the initial planning process. (See § 130.42).

e. Other revisions are:

(1) Detailed explanation has been included on the requirements for increasing the scope of basin plans over time. (See § 130.20).

(2) In order to facilitate coordination between basin and facilities planning, it is now required that the state identify facilities planning areas through the continuing planning process. (See §§ 130.21 and 130.51).

(3) Some commenters indicated that the interim regulations did not address the antidegradation issue. The regulations now require explicitly that the planning process provide that basin plans be consistent with water quality standards including any antidegradation statements. (See § 130.22).

(4) Many comments were received regarding segment classification. Clarifying language has been included with respect to segment classification:

(i) Editorially, the word "class" has been deleted from the segment classifications.

(ii) Water Quality segment classification must now include the specific water quality parameters requiring consideration.

(5) Provisions regarding land use and non-point sources of pollutants have been modified with respect to scope of basin planning and timing considerations and section 208(b)(2) (F through K) of the Act. (See §§ 130.23 and 131.202).

(6) Since land disposal of wastes may have adverse effects on surface or ground waters, requirements respecting control of such disposal have been restated.

under the authority of sections 208 and 303(e), to clarify the need to consider the consequences to each category.

(7) Requirements regarding revisions to the process have been clarified. Annual reviews and, as may be necessary annual revisions are now required as part of the Section 106 State program submittal each year. The 1974 revisions will be submitted within 90 days following the publication of these regulations and must address whatever changes are necessary to insure conformity with §§ 130.11(e) and (f), 131.203, and 130.42. (See § 130.54).

(8) Changes requested that were not incorporated were to lengthen beyond five years the period of basin plan coverage and to allow a period greater than 30 days for public participation. The intent is that the basin plans will be more specific if limited to a five year span; and under the regulations this is only a minimum requirement which may be expanded to cover a twenty year period broken into five year increments. Further, it should be noted that priorities and expenditures within a five year period determine controls and water quality improvements over a much longer period.

The minimum period for public participation was not extended beyond 30 days since it was felt that this period normally would be sufficient for presenting one's case and that additional time, where warranted, could be allowed in individual cases.

State continuing planning processes which have been submitted and approved pursuant to the interim regulations published March 27, 1973, remain in force until revisions are made to the process pursuant to § 130.54. In consideration of the foregoing, Title 40 CFR is hereby amended to add a new Part 130—Policies and Procedures for State Continuing Planning Process.

Effective date: July 3, 1974.

Dated: May 24, 1974.

RUSSELL TRAIN
Administrator

Subpart A—Scope and Purpose; Definitions

- Sec.
130.1 Scope and purpose
130.2 Definitions

Subpart B—General Requirements

- 130.10 Process coverage and coordination functions.
130.11 Classification of basin segments.
130.12 Designation of planning agencies.
130.13 Public participation.
130.14 Separability.

Subpart C—Requirements for Basin Plans

- 130.20 Content and scope of basin plans
130.21 Establishment of planning areas.
130.22 Water quality standards: antidegradation.
130.23 Non-point sources of pollutants.
130.24 Monitoring and surveillance.
130.25 Intergovernmental cooperation.
130.26 Adoption, certification, and submittal of basin plans.

Subpart D—Requirements for Annual State Strategy

- 130.40 State strategy: contents.
130.41 Segment priority ranking.

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- Sec.
130.43 Agreement on level of detail and timing of basin plan preparation.
130.43 State municipal discharge inventory: priority ranking.
130.44 State industrial discharge inventory.

Subpart E—Submission and Approval of Planning Process; Reports

- 130.50 Submission of process.
130.51 Contents of process submittal.
130.52 Review and approval or disapproval of process.
130.53 Prohibition of approval of certain planning processes; withdrawal of process approval.
130.54 Review and revisions of process.
130.55 Reports; State program submittal.

Subpart F—Relationship of Process to Permit Program

- 130.60 Relationship of continuing planning process to State participation in National Pollutant Discharge Elimination System.

AUTHORITY: Secs. 106, 303(b)(2), 303(d), 303(e), 305(b), 314, 301, 516(b) of the Federal Water Pollution Control Act, as amended; Pub. L. 92-500, 86 Stat. 816 (1972); (33 U.S.C. 1251 et seq.).

Subpart A—Scope and Purpose; Definitions**§ 130.1 Scope and purpose.**

- (a) This part establishes regulations specifying procedural and other requirements for the submission and approval of State continuing planning processes pursuant to section 303(e) of the Federal Water Pollution Control Act, as amended; Pub. L. 92-500, 86 Stat. 816 (1972); (33 U.S.C. 1251 et seq.).
- (b) The broad goals of the continuing planning process are: to provide the States with the water quality assessment and program management information necessary to make centralized coordinated water quality management decisions; to encourage water quality objectives which take into account overall State policies and programs, including those for land use and other related natural resources; and to provide the strategic guidance for developing the annual State program submittal under section 106 of the Act.
- (c) The State continuing planning process is directed toward the attainment of water quality standards established under section 303 of the Act which are designed to achieve the goals set forth in the Act. The continuing planning process provides a mechanism for developing an annual State strategy for directing resources; establishing priorities; scheduling actions; and reporting progress toward the achievement of program objectives.
- (d) The "continuing planning process" is the process by which the State develops:
- (1) The annual State strategy, which sets the State's major objectives and priorities for preventing and controlling pollution over a one to three year period.
 - (2) Individual basin plans, which establish specific programs and targets for preventing and controlling water pollution in individual basins and establish policies which guide decision making over a five to ten year span of time.

- (3) The annual program plan (section 106), which establishes the results expected and identifies the resources committed for the State program each year.
- (e) This part describes:

- (1) The general requirements for the planning process (Subpart B of this part).
- (2) The planning process requirements for the preparation of basin plans (Subpart C of this part).
- (3) The preparation of the annual State strategy (Subpart D of this part).
- (4) The requirements for submission and approval of the planning process (Subpart E of this part).
- (5) The relationship of the process to the permit program (Subpart F of this part).

§ 130.2 Definitions.

As used in this part, the following terms shall have the meanings set forth below.

- (a) The term "Act" means the Federal Water Pollution Control Act, as amended; Pub. L. 92-500, 86 Stat. 816 (1972); (33 U.S.C. 1251 et seq.).
- (b) The term "EPA" means the United States Environmental Protection Agency.
- (c) The term "Administrator" means the Administrator of the Environmental Protection Agency.
- (d) The term "Regional Administrator" means the appropriate EPA Regional Administrator.
- (e) The terms "continuing planning process," "planning process," and "process" mean the continuing planning process required by section 303(e) of the Act including any revision thereto.
- (f) The term "basin plan" means the water quality management plan for each hydrologic basin or other approved basin unit within a State. Such plans form a basis for implementing applicable effluent limitations and water quality standards, and consist of such elements as are necessary for sound planning and program management in the basin covered by the plan. Requirements for the preparation of basin plans are described in Part 131 of this chapter.
- (g) The term "effluent limitation" means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, but does not include schedules of compliance.
- (h) The term "schedule of compliance" means remedial measures to be accomplished and a sequence of actions or operations leading to compliance with applicable effluent limitations, water quality standards and other requirements of State and Federal law. Schedule of compliance includes those sequenced actions or operations contained in a National Pollutant Discharge Elimination System permit which are legally binding on the discharger; whereas, the term "target abatement dates" means a sequence of actions or control measures which have not been formally adopted through the permit process and therefore are not legally binding on the discharger until they are adopted in a permit.

ures which have not been formally adopted through the permit process and therefore are not legally binding on the discharger until they are adopted in a permit.

- (i) The term "municipal needs" means the total capital funding required for construction of publicly owned treatment works, as defined in section 212 (2)(A) and (B) of the Act, required to meet national water quality objectives of sections 301 and 302 of the Act.
- (j) The term "National Pollutant Discharge Elimination System" means the national permitting system authorized under section 402 of the Act, including any State or interstate permit program which has been approved by the Administrator pursuant to section 402 of the Act.
- (k) The term "phasing of planning" means the State schedule approved by the Regional Administrator for the preparation of basin plans.
- (l) The term "basin" means the streams, rivers, tributaries, and lakes and the total land and surface water area contained within one of the major or minor basins defined by EPA, or any other basin unit as agreed upon by the State(s) and the Regional Administrator. Unless otherwise specified, "basin" shall refer only to those portions within the borders of a single State.
- (m) The term "segment" means a portion of a basin, the surface waters of which have common hydrologic characteristics (or flow regulation patterns); common natural physical, chemical, and biological processes; and common reactions to external stresses, such as the discharge of pollutants. (See § 130.11(d)).
- (n) The term "significant discharge" means any point source discharge for which timely management action must be taken in order to meet the water quality objectives for the basin within the period of the operative basin plan. The significant nature of the discharge is to be determined by the State, but must include, at a minimum, any discharge which is causing or will cause serious or critical water quality problems relative to the segment to which it discharges.
- (o) The definitions of the terms contained in section 502 of the Act shall be applicable to such terms as used in this part unless the context otherwise requires.

Subpart B—General Requirements**§ 130.10 Process coverage and coordination function.**

- (a) The process shall provide for the preparation of basin plans for all waters within the State, as provided in Subpart C of this part.
- (b) The process shall establish phasing of plans to be accomplished, as provided in Subpart D of this part.
- (c) The process shall provide the method by which the State shall coordinate all water quality planning, programming and management.

(d) The process shall provide the method by which the State shall coordinate its water quality management planning with related State and local comprehensive, functional, and project planning activities, including land use and other natural resources planning activities.

(e) The process shall provide the method by which the State shall coordinate its water quality management planning with that of its neighboring States.

§ 130.11 Classification of basin segments.

(a) The requirements of this part and Part 131 of this chapter vary according to the classification of each particular basin segment, such that the time and resources to be expended in developing the basin plan for a particular segment, as well as the substantive content of the basin plan, will be commensurate with the severity of the water pollution problem, as described in Subpart B of Part 131 of this chapter.

(b) The classification of segments also shall be used in establishing State priorities in accordance with Subpart D of this part.

(c) The classification of segments shall be based upon measured instream water quality, where available.

(d) Each basin segment shall be classified as follows:

(1) **Water quality.** Any segment where it is known that water quality does not meet applicable water quality standards and/or is not expected to meet applicable water quality standards even after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of the Act.

(2) **Effluent limitations.** Any segment where it is known that water quality is meeting and will continue to meet applicable water quality standards or where there is adequate demonstration that water quality will meet applicable water quality standards after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of the Act.

(e) Each Water Quality segment classification shall include the specific water quality parameters requiring consideration in the total maximum daily load allocation process, as provided in § 131.304 of this chapter.

(f) Each segment classification shall reflect any necessary allowance for anticipated economic and demographic growth over at least a five year period and an additional allowance reflecting the degree of precision and validity of the analysis upon which the classification is based. Where the analysis is less precise, or there is uncertainty concerning growth projections, a greater margin of safety shall be required for the assignment of any segment as an Effluent Limitation segment. In determining the additional allowance, consideration should be given to economic and demographic projections that are utilized in other State environmental and natural resource programs.

§ 130.12 Designation of planning agencies.

(a) (1) The Governor of a State shall designate a State agency responsible to conduct the required planning under this part and Part 131 of this chapter. The Governor may designate a local or interstate agency to conduct all or any portion of the planning within each basin and may assign planning responsibilities under the process and Part 131 of this chapter to any such designated agency.

(2) Locally elected officials of general purpose units of government, and other pertinent local and area-wide organizations within the jurisdiction of a proposed designated agency, shall be consulted prior to any final designation.

(b) (1) Each designation shall include:

(i) The agency's name, address, and name of the director.

(ii) The agency's jurisdiction (geographical coverage and extent of planning responsibilities).

(2) In the event that all or a portion of a basin plan is to be undertaken by an agency other than the State water pollution control agency, evidence from such other agency shall be supplied which shows acceptance of such designation and the agency's intent to comply within the time schedules set forth in the planning process.

(3) The State may make additional assignments, as set forth in this section, from time to time. Such designations shall be accomplished by revising the planning process as provided in § 130.54.

§ 130.13 Public participation.

Each process, and any revision thereof, shall provide for public participation in accordance with section 101(e) of the Act and regulations issued by the Administrator thereunder. Public participation, with adequate opportunity for public hearing upon proper showing, shall be required on significant elements of the planning process, including the proposed State strategy and priority lists developed under the continuing planning process pursuant to section 106 regulations.

§ 130.14 Separability.

If any provision of this part, or the application of any provision of this part to any person or circumstance, is held invalid, the application of such provision to other persons or circumstances, and the remainder of this part, shall not be affected thereby.

Subpart C—Requirements for Basin Plans

§ 130.20 Content and scope of basin plans.

(a) The process shall provide that basin plan analysis, preparation, documentation, and coordination for segments shall be developed as prescribed in Part 131, Subparts B and C, of this chapter.

(b) The process shall provide that basin planning will increase in scope as prescribed in § 131.302 of this chapter.

§ 130.21 Establishment of planning areas.

The process shall provide for the establishment of basin planning areas as specified in § 131.303 of this chapter.

§ 130.22 Water quality standards; anti-degradation.

(a) The process shall provide that each basin plan shall set forth and be consistent with applicable water quality standards, including any antidegradation statement.

(b) The process, including the basin plans developed as part of the process, shall be used by the States to assist in making any necessary revisions of water quality standards.

§ 130.23 Nonpoint sources of pollutants.

The process shall provide that, where the Governor so determines, the requirements of section 208(b)(2) (F through K) may be applied on a statewide basis, as prescribed in regulations prepared for designation of area-wide waste treatment management planning areas. (§ 126.20 of this chapter.)

§ 130.24 Monitoring and surveillance.

The process shall provide for a monitoring and surveillance program which is designed to assure collection of data necessary to establish and review water quality standards, determine total maximum daily loads, load allocations and effluent limitations, and assess, where required, the contamination of land and groundwater systems caused by disposal of residual wastes or other pollutants on land or in subsurface excavation, as described in Part 131, Subpart D, of this chapter; and to establish the relationship between water quality and individual discharges and identify nonpoint sources of pollutants. (See also Subpart B of Part 35 of this chapter.)

§ 130.25 Intergovernmental cooperation.

(a) The process shall provide that in the preparation of basin plans, adequate area-wide and local planning inputs will be included in the basin plan as appropriate. (See § 131.306 of this chapter.)

(b) The process shall provide that local governments within the State will be encouraged to utilize existing, or develop appropriate institutional or other arrangements with other local governments in the same State, for cooperation in the development and implementation of basin plans.

(c) The process shall provide for interstate cooperation whenever a basin plan involves the interests of more than one State. Such provision shall include the following assurances:

(1) That when a basin plan is under development in the State for an area affecting or affected by waters of one or more other States, the planning agency will cooperate with each such other State in the analyses and planning pertinent to such area, including but not limited to problem assessment and priorities and schedules for basin plan preparation. (See §§ 130.41 and 130.42.)

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(2) That when a basin plan is under development in another State for an area affecting or affected by waters of the State, the State will cooperate with such other State in the analyses and planning pertinent to such area.

(d) The use of interstate agencies in all phases of interstate cooperation in water quality management planning is encouraged.

(e) The process shall describe the mechanism for State approval of water quality management basin plans involving interstate waters.

§ 130.26 Adoption, certification and submittal of basin plans.

The process shall provide that after appropriate public hearings the basin plans will be adopted, certified, and submitted to the appropriate Regional Administrator, as specified in Part 131, Subpart E, of this chapter.

Subpart D—Requirements for Annual State Strategy

§ 130.40 State strategy: contents.

(a) The planning process shall provide for the preparation of an annual State strategy. The annual State strategy shall be submitted as part of the section 106 State program submittal, as required pursuant to § 130.55. The Governor or his designee(s) shall be provided an opportunity to be involved in the identification and resolution of significant issues in the formulation of the State strategy.

(b) The State strategy shall contain:

(1) A statewide assessment of water quality problems and the causes of these problems.

(2) A listing of the geographical priorities of these problems.

(3) A description of the State's approach to solving its water quality problems identified in subparagraph (1) of this paragraph, including a discussion of the extent to which non-point sources of pollution will be addressed by the State program.

(4) A listing of the priorities and scheduling of permits, construction grants, basin plans, areawide plans and other appropriate program actions to carry out subparagraph (3) of this paragraph.

(5) A description of the level of detail and the schedule for preparation of basin plans proposed for each basin or portion thereof.

(6) A description of the manner in which the information, analyses, estimates, or recommendations required to satisfy the provisions of section 305(b) of the Act will be obtained together with all such information, analyses, estimates or recommendations as may be available at the time of submission of the State strategy unless the State chooses to submit the 305(b) report separately from the State strategy.

(c) The State strategy should be based upon other information derived from completed basin plans, when available, and from other available informa-

tion in areas where basin plans are not completed.

§ 130.41 Segment priority ranking.

(a) Based on the annual statewide assessment of the water quality problems and causes of these problems developed pursuant to § 130.40(a)(1), the State shall rank each segment in priority order, taking into account:

(1) Severity of pollution problems.

(2) Population affected.

(3) Need for preservation of high quality waters.

(4) National priorities as determined by the Administrator.

(5) Additional factors identified by the State in its priority system.

(b) Segments of the same basin need not be listed together; however, their ranking in the State list shall be consistent with their ranking in any approved basin plan.

(c) The State segment priority ranking generally shall govern the development of basin plans, construction of publicly owned treatment works, issuance of permits, and other program activities.

§ 130.42 Agreement on level of detail and timing of basin plan preparation.

(a) The level of detail and timing of basin plan preparation proposed for each basin, or portion thereof, shall be determined by agreement between the State and the appropriate Regional Administrator. All basin plans must be submitted by July 1, 1975; however, the appropriate Regional Administrator may extend the time for submission by agreement with the State. The State will provide a proposed schedule for basin plan preparation and proposed level of detail of basin planning as part of the annual State strategy. Approval of the section 106 State program, including the annual State strategy, will serve as approval of the schedule and level of detail of basin planning.

(b) The schedule shall provide a sequence for phasing of planning to assure the orderly implementation of the planning process, consistent with existing planning efforts and needs and the expanding capabilities for planning in the State. Such schedule shall determine the State's priorities for the development of basin plans pursuant to the process during the period covered by the schedule.

(c) The schedule of basin plans shall be determined following consideration of:

(1) The ranking of segments pursuant to § 130.41 and the number of Water Quality segments in the basin; and

(2) Any other factors the State may deem appropriate in developing and scheduling plans for sound water quality management.

(d) Where agreement on level of detail and timing of basin planning has not previously been specified for Fiscal Year 1975, the State shall submit the proposed level of detail and timing of basin planning together with planning process revisions as specified in § 130.54.

§ 130.43 State municipal discharge inventory; priority ranking.

(a) Each State shall establish and maintain a State Municipal Discharge Inventory. The inventory shall set forth a Statewide ranking of significant municipal dischargers. The inventory shall be used in establishing priorities and output estimates for municipal facilities construction and in other program actions to be developed as part of the State program submittal required under section 106 of the Act. The inventory shall become the list of municipalities required in § 35.915(b) of this chapter for award of construction grants.

(b) The State Municipal Discharge Inventory shall be revised and submitted at least once each year, as required pursuant to § 130.55.

(c) The State shall rank significant municipal dischargers consistent with the segment priority rankings contained in § 130.41.

§ 130.44 State industrial discharge inventory.

Each State shall establish and maintain a State Industrial Discharge Inventory. The inventory should reflect the relative importance of significant dischargers and shall be used for guidance in establishing the annual State strategy. Problem identification and segment ranking should be used in developing the State Industrial Discharge Inventory.

Subpart E—Submission and Approval of Planning Process; Reports

§ 130.50 Submission of process.

(a) The Governor of each State shall submit to the Regional Administrator the continuing planning process.

(b) Submission shall be accomplished by delivering to the Regional Administrator five copies of the planning process and a letter from the Governor notifying him of such action.

§ 130.51 Contents of process submittal.

(a) The submittal shall contain, at a minimum, the following:

(1) A map of the State showing basins and segments and a map showing recommended areas delineated for facilities planning.

(2) A listing of the classifications of segments.

(3) A description of the planning method employed to formulate basin plans.

(4) A listing of the planning agency or agencies that will perform the planning under this part and Part 131 of this chapter.

(5) A description of public participation in the development of the process, including participation of local governments.

(6) A statement that legal authorities required to prepare and adopt basin plans as required by the planning process exist or will be obtained.

(7) A description of reports, including the State strategy, that will be submitted under section 106 of the Act.

§ 130.52 Review and approval or disapproval of process.

The Regional Administrator shall approve or disapprove the planning process submitted pursuant to § 130.50 within 30 days after the date of submission, as follows:

(a) If the Regional Administrator determines that the planning process conforms with the requirements of the Act and this Part 130, he shall so notify the Governor by letter.

(b) If the Regional Administrator determines that the process fails to conform with the requirements of the Act and this Part 130, he shall so notify the Governor by letter and shall state:

- (1) The specific revisions necessary to obtain approval of the process.
- (2) The time period for resubmission of the revised process or portions thereof.

§ 130.53 Prohibition of approval of certain planning processes; withdrawal of process approval.

The Regional Administrator shall not approve any continuing planning process which will not result in timely basin plans for all navigable waters within the State that conform with the applicable requirements of sections 303(e), 314(a), 208(b) (2) (F-K), and 303(d) of the Act and Part 131 of this chapter, relating to such basin plans. Substantial failure of any basin plan or plans prepared pursuant to the process to conform with such applicable requirements may indicate that the planning process by which such basin plan or plans were developed was deficient and should be revised. Failure to accomplish necessary revisions of the planning process may result in withdrawal of approval of part or all of the process.

§ 130.54 Review and revisions of process.

(a) The State shall review annually its continuing planning process and shall revise the process as may be necessary to assure the development and maintenance of a State strategy and current basin plans which will accomplish national water quality objectives in conformity with the requirements of the Act.

(b) The State shall submit annual planning process revisions to the Regional Administrator as part of the State Program Plan submittal under section 106 of the Act.

(c) In addition to any other necessary revisions identified by the State or the Regional Administrator, the State shall submit, within 90 days after publication of these regulations, whatever revisions to its planning process are necessary to insure conformity with §§ 130.11(e) and 130.11(f) and § 131.203 of this chapter.

(d) Revisions of the process shall be submitted in accordance with § 130.50.

(e) Review and approval or disapproval of revisions of the process shall be carried out in accordance with § 130.52.

§ 130.55 Reports; State program submittal.

The annual State strategy including the State problem assessment and priori-

ties described in § 130.41, the State/EPA agreement on level of detail and timing of basin plan preparation as described in § 130.42, the State Municipal Discharge Inventory described in § 130.43, and the State Industrial Discharge Inventory described in § 130.44, as well as any other program progress report(s) which may be required, shall be submitted as part of the State program submittal under section 106 of the Act.

Subpart F—Relationship of Process To Permit Program

§ 130.60 Relationship of continuing planning process to State participation in National Pollutant Discharge Elimination System.

(a) State participation in the National Pollutant Discharge Elimination System, other than the interim participation provided in section 402(a) (5) of the Act, shall not be approved for any State which does not have an approved continuing planning process.

(b) Approval of State participation in the National Pollutant Discharge Elimination System may be withdrawn from any State if approval of the continuing planning process is withdrawn for any reason, including withdrawal of process approval based on gross failure to comply with the schedule for basin plan preparation (§ 130.42) or on failure of basin plans to conform with the planning process requirements (§ 130.53).

[FR Doc. 74-12559 Filed 5-31-74; 8:46 am]

PART 131—PREPARATION OF WATER QUALITY MANAGEMENT BASIN PLANS

The purpose of this part is to amend 40 CFR to add a new Part 131—Preparation of Water Quality Management Basin Plans. On May 23, 1973, notice was published in the FEDERAL REGISTER (38 FR 13567) that the Environmental Protection Agency was proposing policies and procedures designed to assist States in the preparation of water quality management basin plans pursuant to section 303(e) of the Federal Water Pollution Control Act, as amended; Pub. L. 92-500, 86 Stat. 816 (1972); (33 U.S.C. 1251 et seq.) (hereinafter referred to as the Act).

Section 303(e) of the Act requires each State to have a continuing planning process which is consistent with the Act. Basin plans under this part will be prepared in accordance with the State's continuing planning process submitted and approved pursuant to Part 130 of this chapter.

The regulations describe the requirements for preparation of basin plans and the procedures governing basin plan adoption, submission, revision, and EPA approval. The relationship of basin plans with EPA grants and the national permit system also is described. Provision is included for coordination between basin plans and any discharge permit for a source located in a planning area.

The regulations are designed to assure that basin plans prepared pursuant to this part will be appropriate for water quality management both in areas hav-

ing complex water quality problems and in less complicated situations.

Written comments on the proposed regulations were invited and received from interested parties. A number of verbal comments also were received. The Environmental Protection Agency has carefully considered all submitted comments. All written comments are on file with the Agency. Certain of these comments have been adopted or substantially satisfied by editorial changes and deletions from or additions to the regulations. These and other principal changes are discussed below and in the preamble to Part 130 of this chapter.

(a) Since § 150.1-2 of this chapter will be superseded by Part 35, Subpart E of this chapter, the requirement that basin plans be coordinated with § 150.1-2 plans, has been deleted. Also, the requirement that basin plans be coordinated with water quality standards implementation plans has been deleted.

(b) Each basin plan must now be based on "best available" monitoring and surveillance data. (See § 131.490).

(c) Requirements regarding revisions to basin plans have been clarified. Each basin plan must be revised within five years of the last approval date; specific considerations in the revision process are also listed. (See § 131.505).

Section 131.507 clarifies § 35.925-2 to indicate that disapproval by the Regional Administrator of a basin plan, or relevant portion thereof, for the area where a project is to be located may constitute grounds for not approving a grant for such project. This revision will be included in an amendment to 40 CFR Part 35, Subpart E, § 35.925-2.

Those basin plans prepared under State continuing planning processes which have been submitted and approved pursuant to the interim regulations published May 23, 1973, remain in force until revisions are made to the basin plans pursuant to § 131.505 of this part. In consideration of the foregoing, Title 40 CFR is hereby amended to add a new Part 131—Preparation of Water Quality Management Basin Plans.

Effective date: July 3, 1974.

Dated: May 24, 1974.

RUSSELL E. TRAHN,
Administrator.

Subpart A—Scope and Purpose; Definitions

- Sec.
131.100 Scope and purpose.
131.101 Definitions.

Subpart B—Preparation for Basin Planning

- 131.200 General.
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131.202 Scope and timing of basin plan submission.
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131.508 Discharge permit terms and conditions.
131.509 Separability.

AUTHORITY: Sec. 303(e) of the Federal Water Pollution Control Act, as amended; Pub. L. 92-500, 86 Stat. 816 (1972); (33 U.S.C. 1251 et seq.) (hereinafter referred to as the Act).

Subpart A—Scope and Purpose: Definitions

§ 131.100 Scope and purpose.

(a) This part establishes regulations specifying procedural and other requirements for the preparation of basin plans pursuant to a State continuing planning process approved in accordance with section 303(e) of the Federal Water Pollution Control Act, as amended; Pub. L. 92-500, 86 Stat. 816 (1972); (33 U.S.C. 1251 et seq.), and Part 130 of this chapter.

(b) A basin plan is a management document which identifies the water quality problems of a particular basin and sets forth an effective remedial program to alleviate those problems. The basin plan is neither a broad water and related land resources plan nor a basinwide facilities plan. The value of a basin plan lies in its utility in making water quality management decisions on a basinwide scale. To achieve this objective, the detail of the basin plan should be

designed to provide the necessary analysis for basin management decisions.

Moreover, there must be a flexible revision mechanism to reflect changing conditions in the basin. A basin plan should be a dynamic management tool, rather than a rigid, static compilation of data and material.

(c) A basin plan will provide for orderly water quality management by:

(1) *Identifying problems.* Assessing existing water quality, applicable water quality standards, point sources of pollution, and, if appropriate, non-point sources of pollution.

(2) *Assessing needs and priorities.* Assessing water quality and abatement needs so as to identify any deficiencies in the Statewide priorities developed in accordance with §§ 130.41 through 130.44 of this chapter.

(3) *Scheduling actions.* Setting forth compliance schedules where permits have been issued or target abatement dates where permits have not been issued and indicating necessary State and local activities.

(4) *Coordinating planning.* Identifying needs and priorities for section 201 facility plans and section 208 areawide plans within the basin and reflecting the results of those activities.

§ 131.101 Definitions.

The definitions set forth in § 130.2 of this chapter shall apply to this part.

Subpart B—Preparation for Basin Planning

§ 131.200 General.

(a) Each basin plan under this part shall be prepared pursuant to the State planning process submitted and approved in accordance with Part 130 of this chapter.

§ 131.201 Basin plan elements.

(a) Basin planning elements vary with the water quality problems and the water quality decisions to be made in a particular basin. Generally, basin planning elements are consonant with the segment classifications indicated in the following table.

(b) The waters within the planning basin shall be classified as Water Quality segments and/or Effluent Limitation segments as described in Part 130, Subpart B of this chapter.

(c) The segment analyses as outlined in this Part 131, shall be used to reclassify, as appropriate, the current State classification of segments pursuant to § 130.11 of this chapter.

(d) The level of detail and the schedule of basin plan preparation will depend on the water quality problems and the water quality decisions to be made and shall be determined by the State/EPA agreement in accordance with § 130.42 of this chapter.

BASIN PLANNING ELEMENTS

	Water quality segments	Effluent limitation segments
1. Inventory and ranking of significant dischargers (§ 131.301).....	X	X
2. Schedule of compliance or target dates (§ 131.302).....	X	X
3. Assessment of municipal needs (§ 131.303).....	X	X
4. Determination of total maximum daily loads (§ 131.304).....	X	
5. Established or targeted load allocations and effluent limitations (§ 131.305).....	X	
6. Assessment of non-point sources of pollution (§ 131.306).....	X	
7. Residual waste controls (§ 131.307).....	X	X
8. Recommended water quality standards revisions (§ 131.308).....	X	X
9. Planning relationships (§ 131.309).....	X	X
10. Appropriate monitoring and surveillance programs (Part 131 Subpart D).....	X	X
11. Interstate/Intergovernmental cooperation (§ 130.25).....	X	X

§ 131.202 Scope and timing of basin plan submissions.

(a) All basin plans must be submitted by July 1, 1975, unless an extension of time has been granted by the Regional Administrator pursuant to § 130.42 of this chapter, and shall concentrate on:

(1) Point source management provisions, including data assembly and significant discharge inventories;

(2) Waste load analysis in Water Quality segments, based on existing or readily obtainable data;

(3) Schedules of compliance or target abatement dates;

(4) Assessment of municipal needs for Federal construction grant assistance; and

(5) A recognition of non-point sources, to the extent feasible, to establish discharge load allocations for point source discharges.

(b) Revisions to basin plans after July 1, 1975, shall reconsider, where substantive changes have occurred, current actions with respect to the most recent data or analysis and shall concentrate, if appropriate, on the identification and evaluation of methods and procedures (including land use requirements) to control, to the extent feasible, non-point sources of pollution.

§ 131.203 Boundaries of planning area.

(a) Each basin planning area shall be the area within the basin boundary.

(b) Except as provided in paragraph (c) of this section, the basin boundaries shall be those identified as minor basins in the EPA water quality information system.

(c) The State planning process may provide for the establishment of planning boundaries differing from those identi-

ned in the EPA basin system. Any such differing boundaries shall be submitted to the Regional Administrator for approval.

(d) Each basin plan shall contain a delineation of the boundaries of the basin on a map of appropriate scale. Such map or maps shall include, but are not limited to:

(1) An identification of the location of each significant discharger by river mile and/or shore location for bays, lakes and estuaries.

(2) An identification of the location of all monitoring stations (Federal-State-Local) by river mile and/or grid location.

NOTE: Such a map may omit discharger and monitoring station locations if such locations are available in the EPA water quality information system and if the basin plan includes the listing described in § 131.301(b) and a list of monitoring stations and their locations.

Subpart C—Basin Plan Methodology and Contents

§ 131.300 General.

This subpart describes the methodology to be used in formulating the appropriate elements of basin plans as specified in Subpart B of this part.

§ 131.301 Inventory of sources; analysis of significant discharges; segment priority ranking.

(a) Each basin plan shall include an inventory of municipal and industrial sources and a ranking of municipal sources which shall be used by the State in the development of the State strategy, described in Part 130, Subpart D of this chapter.

(b) Each basin plan shall include an analysis of each significant discharger of pollutants, set forth the location of each source, and describe, by parameter, its waste discharge characteristics. The analysis should include data from the National Pollutant Discharge Elimination System. A summary of the information should be included in the basin plan.

(c) Each basin plan shall include a ranking of the basin segments in order of abatement priority for the purpose of identifying deficiencies in the State-wide priorities developed in §§ 130.41 through 130.44 of this chapter.

§ 131.302 Schedules of compliance; coordination with permits.

(a) Each basin plan shall include schedules of compliance or target dates of abatement for significant dischargers identified in § 131.301.

(b)(1) Each schedule of compliance or target date of abatement shall include milestone dates, as follows:

(i) The major interim and final completion dates included as terms or conditions of a permit, if any, that are necessary to assure an adequate tracking of progress towards compliance.

(ii) Where the source is required to obtain a permit under the National Pollutant Discharge Elimination System but no permit has been issued as of the date that the plan is submitted, a target date when the source must obtain a per-

mit, as well as other target abatement dates that will enable an adequate tracking of progress towards completion of the facility.

(2) A basin plan may, at the option of the State, describe the legal basis for enforcement of schedules of compliance (e.g., adopted as State law; promulgated as State regulations; incorporated or to be incorporated in waste discharge permits).

§ 131.303 Assessment of municipal needs.

(a) Each basin plan shall include an assessment of municipal needs that have been identified, using the following criteria:

(1) Load reduction to be achieved by each facility, and why this reduction is required to attain and maintain applicable water quality standards and effluent limitations.

(2) Population or population equivalents to be served, including forecast growth or decline of such population over a 20 year period following the scheduled date for installation of the needed facility. These analyses shall take into account projections used in other State and local planning activities.

(3) Types of facilities needed and their investment costs derived from approved section 201 facilities plans, section 208 areawide waste treatment management plans, or facilities designs and specifications, if available.

(4) In the absence of the above plans and designs, an indication of facilities required to be considered as an option under future section 201 facilities or section 208 areawide planning and preliminary estimates of their costs.

(b) Cost estimates for facilities meeting the above criteria shall be based on engineering plans, specifications, and detailed cost estimates, where available. For any facility for which detailed estimates do not exist, cost estimates shall be made based on available guidelines prepared by the Administrator.

§ 131.304 Determination of total maximum daily loads.

(a) Each basin plan shall include for each Water Quality segment the total maximum daily loads of pollutants, including thermal loads, allowable for each specific criterion being violated or expected to be violated. Such loads shall be at a level at least as stringent as necessary to implement the applicable water quality standards, including:

(1) Provision for seasonal variation; and

(2) Provision of a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality and an additional margin of safety which takes into account any uncertainty resulting from insufficiency of data, including data from non-point sources of pollutants.

(b)(1) Each basin plan shall estimate for each Water Quality segment where thermal standards may be violated, the total daily thermal load allowable in

such segment. Such load shall be at a level at least as stringent as necessary to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife. Such loads shall take into account:

(i) Normal water temperatures.

(ii) Flow rates.

(iii) Seasonal variations.

(iv) Existing sources of heat input.

(v) The dissipative capacity of the identified segment.

(2) Each estimate shall include an estimate of the maximum heat input that can be made into each Water Quality segment where temperature is one of the criteria being violated and shall include a margin of safety which takes into account lack of knowledge concerning the development of thermal water quality criteria for protection and propagation of indigenous biota in the identified segment.

(c) Where predictive mathematical models are used in the determination of total maximum daily loads, each model shall be identified and briefly described, and the specific use of the model shall be cited.

§ 131.305 Individual point source load allocations; impact on water quality.

Each basin plan shall establish discharge load and thermal load allocations or target allocations for point and non-point sources in each Water Quality segment as follows:

(a) The basin plan shall establish a discharge load allocation or target load allocation in each Water Quality segment for the purpose of establishing effluent limitations for significant dischargers and, to the degree feasible, for other sources including non-point sources identified pursuant to § 131.306 and shall, where appropriate, establish a load allocation for each thermal source. The total of such discharge load allocations or effluent limitations for all sources in the segment shall not exceed the total maximum daily load or thermal load allocation established or estimated for such segment pursuant to § 131.304.

(b) Each discharge load allocation and thermal load allocation established or estimated pursuant to this paragraph shall incorporate an allowance for anticipated economic and demographic growth over at least a five-year period and an additional allowance reflecting the precision and validity of the method used in determining such allowance.

(c) Establishment of discharge load allocations and thermal load allocations shall be coordinated with the development of terms and conditions of permits under the National Pollutant Discharge Elimination System in the manner prescribed in § 131.310.

§ 131.306 Individual non-point source assessment; impact on water quality.

(a) Each basin plan shall provide for the consideration, if appropriate, of agricultural, silvicultural, mining related, construction activity related, salt water intrusion related and other non-point discharges in accordance with § 131.202.

(b) Each basin plan shall identify and evaluate water quality problems in Water Quality segments caused by non-point source discharges including, at a minimum, a description of the type of problem, an identification of the waters affected, including an evaluation of the effects, and an identification of non-point sources contributing to the problem.

(c) Each basin plan shall identify and evaluate alternative procedures and methods (including land use requirements) to control, to the extent feasible, non-point sources contributing to water quality problems in Water Quality segments. The evaluation should consider the technical, legal, institutional, economic and environmental impact and feasibility of such procedures and methods. The most feasible alternative should be described in the basin plan. Data obtained from the basin plan monitoring program established pursuant to Subpart D of this part shall be employed in making the identifications and analyses required by this section.

§ 131.307 Establishment of residual wastes control process.

Each basin plan shall identify necessary controls to be established over the disposition of residual wastes from municipal, industrial, or other water or waste water treatment processing, whenever the processing or disposal occurs within the basin, and shall establish a process to control the disposal of pollutants on land or in subsurface excavations within the basin wherever such disposal causes or may cause violation of water quality standards or wherever such disposal materially affects ground water quality.

§ 131.308 Revisions to water quality standards.

(a) Each basin plan shall set forth the water quality standards and or recommendations for revision of water quality standards, including the antidegradation statement, applicable to each body of water or segment in the basin, or shall include the legal citation of such standards.

(b) Recommendations for revisions of standards shall consider the objectives of the Act, as specified in section 101(a) of the Act, and the social, economic and technical, including natural, considerations for achieving these objectives.

(c) Each basin plan shall be revised as necessary to reflect revisions of the applicable water quality standards.

§ 131.309 Identification of relationship to other plans.

(a) Each basin plan shall evaluate the need for and recommend the planning area for future section 201 facilities plans or section 208 areawide wastewater management plans involving all or any part of the basin, and establish the strategy for the planning area, including waste load allocations and target abatement dates for significant dischargers included.

(b) Each basin plan shall identify the relationship, indicate the current status, and describe the extent of complementary influence of any other water quality or other applicable resource plan prepared or under preparation which involves all or any part of the basin, including:

(1) Each designated areawide waste treatment management plan under section 208 of the Act;

(2) Each facility plan for a proposed project for the construction of treatment works under section 201 of the Act;

(3) Each Level B basin plan pursuant to section 209 of the Act or Pub. L. 89-90; and

(4) Other applicable resource planning including:

(i) State land use programs.

(ii) Activities stemming from the Coastal Zone Management Act (Pub. L. 92-583).

(iii) Activities stemming from the Rural Development Act of 1972 (Pub. L. 92-419).

(iv) Other Federally assisted planning and management programs.

(c) Areawide and facilities plans, when approved by the States, shall modify applicable portions of a basin plan with respect to:

(1) number and location of discharges, provided that the total waste load allocated to the facilities or areawide plan area by the basin plan is not exceeded;

(2) schedules of compliance or target abatement dates; and

(3) the assessment of facilities needs.

(d) Each basin plan shall identify separately each plan which has been integrated with the basin plan.

§ 131.310 Coordination of certain planning elements and terms of permits.

(a) (1) The States and EPA will use their best efforts to establish permit terms and conditions consistent with the applicable individual target effluent limitations and target abatement dates established in any approved basin plan; subject, however, to all the rights that the permit applicant and other interested persons may have under State or Federal law to contest such target effluent limitations and target abatement dates in permit issuance proceedings.

(2) The major milestones required to track basin plan implementation contained in each schedule of compliance for significant dischargers established by a permit shall be incorporated into the basin plan at the first revision of the basin plan which takes place following issuance of the permit.

(b) In a planning area where a basin plan is under development, permit terms and conditions proposed for any source and basin plan preparation shall be coordinated to assure that the basin plan reflects information developed in connection with the permit application and conditions for effluent limitations and a schedule of compliance proposed for the permit.

Subpart D—Monitoring and Surveillance

§ 131.400 Relationship of monitoring and surveillance program to basin plan.

(a) Each basin plan shall be based upon the best available monitoring and surveillance data, as set forth in this subpart, to determine the relationship between instream water quality and individual sources of pollutants and, where practicable, to determine the relationship between land disposal and ground water quality. Such data will facilitate implementation of the basin plan.

(b) Each basin plan shall contain for each Water Quality segment:

(1) A program to monitor the total stream pollutant loadings, including contributions for significant parameters from significant dischargers, which shall be related to the total maximum daily loads established by the basin plan pursuant to § 131.304; and

(2) A continuing program for monitoring in-stream water quality.

(c) In areas where a State determines that a ground water contamination problem exists or may exist from the disposal of pollutants on land, in subsurface excavations or deep wells, the State, to support the establishment of controls or procedures to abate such pollution as identified in § 131.307 shall conduct or require to be conducted by the disposing person or agency a monitoring survey or continuing program of monitoring to determine present or potential effects of such disposal, where such disposal is not prohibited.

(d) Additional description of the State monitoring program is set forth in Subpart B of Part 35 of this title.

§ 131.401 Coverage of monitoring and surveillance program.

In establishing the monitoring and surveillance program for discrete water segments, consideration shall be given to the severity of the pollution and applicable water quality standards and goals, including the use to be made of the waters.

§ 131.402 Use of monitoring surveys for basin plan development.

Each basin plan shall incorporate the results of any monitoring survey completed prior to the date of adoption of the basin plan which provides current data for the area covered by the basin plan. If current data are not available, the State should conduct an adequate monitoring survey to obtain the necessary data before completion of the basin plan.

§ 131.403 Frequency of monitoring surveys.

Each basin plan shall provide that a monitoring survey for the area within Water Quality segments covered by the basin plan will be repeated at appropriately defined intervals, depending on the variability of conditions and changes in hydrologic or effluent regimes. The survey intervals shall be stated in the basin plan.

§ 131.484 Output of monitoring surveys.

The monitoring survey shall produce sufficient information to support the planning for the area. Output shall include, but is not limited to, the following:

(a) A listing of all surface waters, by stream segment or water zone, which do not comply with applicable water quality standards.

(b) In Water Quality segments, a description of pollutant mass balances, including estimates of the total pollutant loads to be controlled in the segment.

(c) Input to the EPA water quality information system of basic data collected during the monitoring survey, and validation and correction of data available prior to the survey.

(d) A listing of stations, parameters, and frequencies to be monitored to provide compliance, progress measurement, and trend information required by this chapter.

(e) A proposed schedule, based on variability of stream quality, expected changes in flow and effluent regimes, or other information, for the subsequent monitoring survey to be undertaken in the same basin.

§ 131.485 Water quality data from fixed stations; input to EPA information system.

(a) Each basin plan may provide for the maintenance of a small number of permanent in-stream water quality trend evaluation stations at key locations in each basin to measure progress toward applicable water quality standards and goals, trends in water quality, and compliance with approved basin plans, and where provided, shall be used as a basis for completing the reports required by 305(b) of the Act.

(b) The operation of these stations shall continue after the completion of applicable monitoring surveys required by this subpart.

(c) The State shall input data from such stations to the EPA information system in such manner as the State and the Regional Administrator shall agree.

Subpart E—Completion and Review of Basin Plans; Revision of Permits and Goals

§ 131.500 Basin plan adoption.

Basin plans shall be officially adopted, after appropriate public participation as described in § 131.502 as the official water quality management plans of the State. Background data not required to be included in the basin plans need not be adopted, but should be made available upon request.

§ 131.501 Certification.

Each basin plan shall include assurances and a certification by the Governor or his designee, that the plan is the official State water quality management plan for the hydrologic unit covered by such plan, that the plan meets all applicable requirements of this Part 131 and Part 130 of this chapter and that the plan will be used for establishing permit conditions, target abatement dates and

assessing priorities for awarding construction grants.

§ 131.502 Public participation.

(a) There shall be conducted, prior to the adoption or any substantive revision of the basin plan and after reasonable notice thereof, one or more public hearings on the proposed basin plan or on parts of the basin plan, in accordance with EPA regulations promulgated pursuant to section 101(e) of the Act.

(b) For purposes of this section:

(1) The term "public hearing" refers to a hearing in which three basic elements of public participation are present: Total public disclosure; planning agency representation; and sufficient opportunity for expression of views by the public. For the purposes of this section, a public hearing need not be an adjudicatory hearing. Further explanation of the public hearing process is contained in Part 100 of this chapter.

(2) The term "substantive" includes but is not limited to any significant revision of water quality standards, total maximum daily loads for Water Quality segments, load allocations for individual dischargers, effluent limitations, schedules of compliance, or target abatement dates.

(3) "Reasonable notice" includes, at least 30 days prior to the date of each hearing:

(i) Notice to the public by prominent advertisement announcing the date, time, and place of such hearing and the availability of the proposed basin plan for public inspection; and

(ii) Notification to the Regional Administrator.

(c) There shall be prepared and retained for submission to the Regional Administrator upon his request a record of each hearing. The record shall contain, at a minimum, a list of witnesses together with the text of each written presentation.

(d) There shall be submitted with the basin plan a description of any major controversy raised by the hearing and the disposition thereof.

(e) The number and location of hearings shall reflect the size of the planning area and its population and population distribution. Public participation and contribution shall be encouraged, commencing with the earliest possible stages of basin plan development and continuing throughout the period of the basin plan preparation, including revisions thereof. The State may conduct its public hearing on the basin plan simultaneously with public hearings on permits in the area covered by the basin plan or in conjunction with any other public hearing involving the significant revision of water quality standards, total maximum daily loads, load allocations, effluent limitations or schedules of compliance. If a public hearing was conducted on a segment of the basin plan for the purpose of the issuance of permits or significantly revising water quality standards, total maximum daily loads, load allocations, effluent limitations, or schedules of compliance, then

this portion of the basin plan need not be subject to additional public hearings.

§ 131.503 Submission of basin plans.

Basin plan submission shall be accomplished by delivering five copies of the adopted portions of the basin plan to the Regional Administrator, together with a letter from the Governor, or his designee, notifying the Regional Administrator of such action.

§ 131.504 Review and approval or disapproval of basin plans.

The Regional Administrator shall approve or disapprove the basin plan submitted pursuant to § 131.503 within 30 days after the date of submission as follows:

(a) If the Regional Administrator determines that the basin plan conforms with the requirements of the Act, this part, the continuing planning process and contiguous plans including neighboring States' plans, he shall notify the Governor or his designee by letter.

(b) If the Regional Administrator determines that the basin plan fails to process or contiguous plans including Act, this part, the continuing planning conform with the requirements of the those of neighboring states, he shall notify the Governor or his designee by letter and shall state:

(1) The specific revisions necessary to obtain approval of the basin plan; and

(2) The time period for resubmission of the basin plan.

(c) Where basin plans involving interstate waters are found to be incompatible, the Regional Administrator shall notify the Governor of each concerned State of the specific areas of incompatibility.

§ 131.505 Revision of basin plans.

(a) At a minimum, the State shall revise each basin plan within five years of the last approval date. The basin plan shall be revised such that it remains a meaningful water quality management document for the five-year period following the revisions. Revisions on a more frequent basis should be made where significant changes occur within the basin. Revisions shall include, but not be limited to, the most current and realistic information on compliance schedules or target abatement dates, construction grant needs and priorities, and waste load allocations. In addition, the basin plan shall be revised such that its increase in scope is in accordance with § 131.202.

(b) Revisions of the basin plan shall be adopted after reasonable notice and public hearings as prescribed in § 131.502.

(c) Revisions shall be submitted in accordance with § 131.503.

(d) Review and approval or disapproval of basin plan revisions shall be carried out in accordance with § 131.504.

§ 131.506 Prohibition of approval of certain basin plans; withdrawal of process approval.

The Regional Administrator shall not approve any basin plan that does not conform with the appropriate require-

ments of section 303(e), 308(b)(2) (F-K), 303(d), and 314(a) of the Act, the continuing planning process, and this part. Substantial failure of any basin plan to conform with the applicable requirements of section 303(e) of the Act and of this part may indicate that the planning process by which such basin plan was developed was deficient and may result in withdrawal of approval of the planning process, or portions thereof, relating to such basin plan. Approval of the State's participation in the National Pollutant Discharge Elimination System may be withdrawn if the process is not fully approved.

§ 131.507 Prohibition of certain construction grants.

Before approving a grant for any project for any treatment works under section 201(g) of the Act, the Regional Administrator shall determine, pursuant to § 35.925-2 of this chapter, that such works are in conformity with any applicable basin plan approved in accordance with this part and Part 130 of this chapter. Disapproval by the Regional Administrator of a basin plan, or relevant por-

tion thereof, for the area where a project is to be located may constitute grounds for not approving a grant for such project, if the disapproval of the basin plan, or relevant portion thereof, is directly related to the project.

§ 131.508 Discharge permit terms and conditions.

Each permit issued under the National Pollutant Discharge Elimination System to any source covered by the basin plan shall be prepared in accordance with the basin plan, as provided in § 131.310. Failure of any permit to conform with the requirements of this section may constitute grounds for the Regional Administrator or the Administrator to object to the issuance of such permit.

§ 131.509 Separability.

If any provision of this part, or the application of any provision of this part to any person or circumstance, is held invalid, the application of such provision to other persons or circumstances, and the remainder of this part, shall not be affected thereby.

[FR Doc. 74-12836 Filed 5-31-74; 8:45 am]

APPENDIX B

WATER QUALITY ANALYSIS THROUGH MODELING

Water quality analysis through modeling enables planners to predict water quality under adjusted conditions of flow, temperature and pollutant loads. Hence, it provides a basis for load allocation and effluent reduction determinations.

Water quality analysis is conducted by the following steps:

- . Categorize the water body.
- . Conceptualize the phenomena.
- . Consider alternative appropriate modeling techniques.
- . Select the least sophisticated adequate modeling technique.
- . Calibrate the selected model.
- . Validate the model.
- . Predict water quality.

These steps are discussed in further detail below. It is expected that in the actual development of the model, additional sources will be consulted to supplement this general information.

A. Categorize the water body.

Water bodies may be categorized in one of three categories: Flowing streams, estuaries, and lakes and impoundments. Dominant transport mechanisms differ in each category; hence, varying modeling techniques are appropriate for differing categories. Further, the degree of sophistication of technique within each water body category may also vary according to conditions in the water. A combination of techniques should probably be employed for analyses where more than one category of water body is involved.

B. Conceptualize the Phenomena.

The phenomena and interactions that occur in the water body must be conceptualized for use in a model. Conceptualization consists of reducing these phenomena to mathematical formulations or equations which will describe variations of the phenomena in response to changes in conditions. The selected model must reflect all major, relevant phenomena.

C. Consider Alternative Appropriate Modeling Techniques.

1. Alternative modeling techniques.

The model to be used depends on the category(ies) of the water body(ies) being analyzed (see paragraph A), the type of water quality problem and the complexity of the problem.

A preliminary investigation of the area to be modeled will indicate the water body category(ies) and problem type(s). This investigation normally will include review of maps and existing water quality and hydrologic data. (See Chapter II, Section A.) Existing data obtained in the preliminary investigation should be used to aid in the determination of the level of sophistication of the study. The object of the selection process should be to utilize the minimum level of sophistication which will provide sufficient detail to justify the selection of water quality management strategies that will result in achieving water quality standards during critical conditions.

For model selection purposes, the techniques may be broken into four general types--A through D. These techniques are identified in Table B-1, below. It should be noted that Types A, B, C and D represent arbitrary points on a scale of techniques that range from simple to very complex, and shadings, variations and combinations of techniques may be appropriate in a given case. The most complex techniques, Type D, should be reserved for research efforts into the most intricate water quality situations.

2. Data considerations in selecting technique.

While model selection is based ultimately on identifying the least complicated adequate technique, the extent of data available or to be acquired must also be considered.

Table B-1

Water Quality Simulation Techniques A-C

<u>Receiving Water Category</u>	<u>Type</u>	<u>Sophistication</u>
Flowing streams	A	Simplified steady state
	B	Steady state
	C	Transient state
	D	Complex
Estuaries	A	Simplified steady state (one dimensional)
	B	Steady state (one or two dimensional)
	C	Transient (two dimensional)
	D	Complex
Lakes and impoundments	A	Completely mixed
	B	One dimensional vertically mixed
	C	Stratified
	D	Complex

The Type A simplified steady state analysis should be a first try, unless clearly inadequate. If consistent data exist or will be collected, Type B steady state models can be validated and applied to a low flow analysis. The accuracy of the study is tied to the amount and completeness of the data.

For Type C studies, detailed data sets are required to capture the variations in water quality.

3. The risk factor as an element in selecting technique.

The water quality analysis and prediction developed by any model can only approximate the actual water quality which will occur under the various suggested hypotheses. The simpler models assume many coefficients based on previous modeling experience. These assumptions will never be entirely correct for the distinct water body being analyzed; hence, remedial measures (effluent reductions) based on the model predictions will not result in water quality exactly as predicted by the model. Since unnecessarily stringent measures may result in costly overbuilding and inadequate measures may fail to protect the aquatic ecosystem and achieve established water quality goals, model selection must consider the degree of risk to be accepted. Risks should be minimized where large construction fund outlays are required or where a particularly frail or valuable aquatic system is at stake. Conversely, complex models which create a need for high cost, lengthy data collection are not justified where, on balance, the consequences of the probable degree of error would be relatively minor.

D. Select least sophisticated adequate modeling technique.

The least sophisticated modeling technique adequate for water quality analysis and prediction should be selected and used where needed in water quality segments to allocate waste loads and establish effluent reduction needs based on critical conditions for each parameter.

Table B-II below summarizes the criteria for the selection of an analytical technique. The table lists criteria for each of the four levels of complexity (A, B, C and D). As has been noted, level D studies should not generally be used. For each level of complexity, the table presents the type of problems and water bodies for which the level is appropriate, the planning characteristics (complexity and risk) associated with that level and the time required for a study.

This table only serves as starting place in the selection process. Each of the criteria should be broken down and studied in more detail before making the final actual technique selection.

TABLE B-11

CRITERIA FOR SELECTION OF TECHNIQUES

Model Complexity	Water Quality Problems and Variable	Water Body	Planning Characteristics	Time Required for Study
Simplified Analysis (Type A)	D.O. (carbon and nitrogen)	One-dimensional streams and estuaries (completely mixed).	a. Low risk of capital and/or environmental quality degradation. b. No alternate strategies and control options available.	Days to weeks
Steady state linear kinetics (Type B)	a. D.O. (carbon and nitrogen) temperature and nonpoint source. b. Anticipated or existing water quality problems.	One or two-dimensional streams, estuaries, rivers, lakes.	a. Low to moderate risk of capital and environmental quality degradation. b. Alternative strategies and control options must be available.	2 to 9 months
Transient linear kinetics analysis (Type C)	a. Time varying D.O. nonpoint source analysis, and temperature. Simple eutrophication analysis. Full storm water overflow analysis. b. Water quality problems.	Rivers, lakes, and estuaries. One or two-dimensional.	a. Moderate to high risk of capital and environmental quality degradation. b. Alternative strategies and control options must be available.	6 to 24 months

TABLE B-11

Model Complexity	Water Quality Problems and Variable	Water Body	Planning Characteristics	Time Required for Study
Time variable non-linear kinetics analysis. (Type D*)	a. Detailed eutrophication analysis et. al. b. Water quality problems. c. High growth of area projected.	All bodies of water.	a. High risk of capital and/or environmental quality degradation. b. Alternative strategies and control must be available.	12 to 36 months

*Type D studies are to be performed only in very complex situations and should be regarded as research efforts.

E. Calibrate the selected model.

After a model is selected its reaction coefficient and other parameters should be calculated and adjusted for the particular water body being analyzed.

F. Validate the model.

Once a model is calibrated its validity should be tested so that a measure of its reliability is obtained. Validation should be done using an independent set of observations. The calibrated model is then used to predict water quality for conditions at the time of the validation set sampling. The errors of estimate are then an indication of how well the model replicates a particular state of the system. An analysis of errors permits scaling the model reliability.

G. Predict water quality.

The model should be used to predict water quality for each parameter, under the critical conditions for the parameter, using 5 year projected waste loads. The first prediction should use effluent limitations based on the best practicable technology ("BPT") and secondary treatment pursuant to sections 301(b)(1)(A) and (B) of the Act, unless those limitations are clearly inadequate for the parameter. If BPT/secondary treatment is inadequate, varying alternative load allocation/effluent reduction combinations should be tried. A cost effective alternative calculated to achieve all applicable water quality standards should be selected.